

small air forces observer

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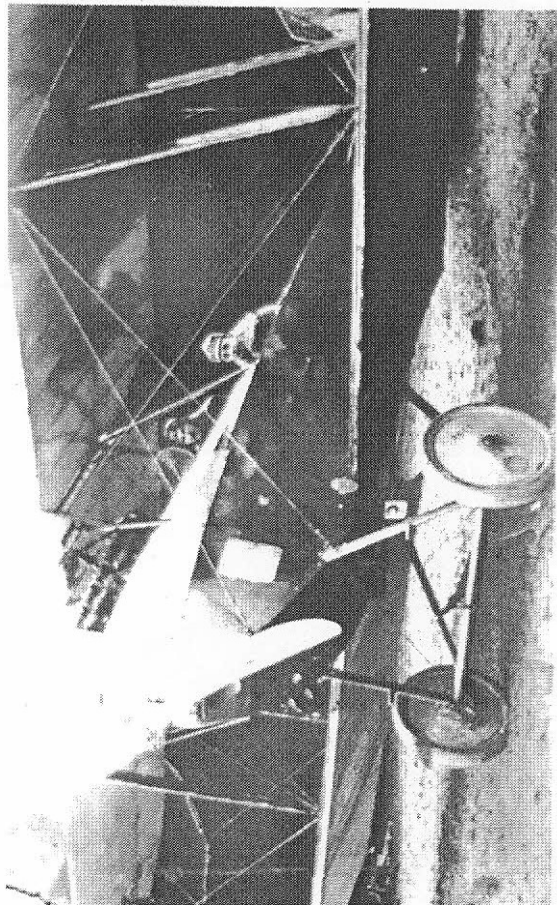
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Mongolian Air Force in the Nomonhan Incident
Lockheed Lodestar in Katanga
Air War over Ruthenia (Part 1)
Togo & Niger Skymasters
Nicaraguan Skymasters
East German Su-22

vol. 34 no. 1 (133)

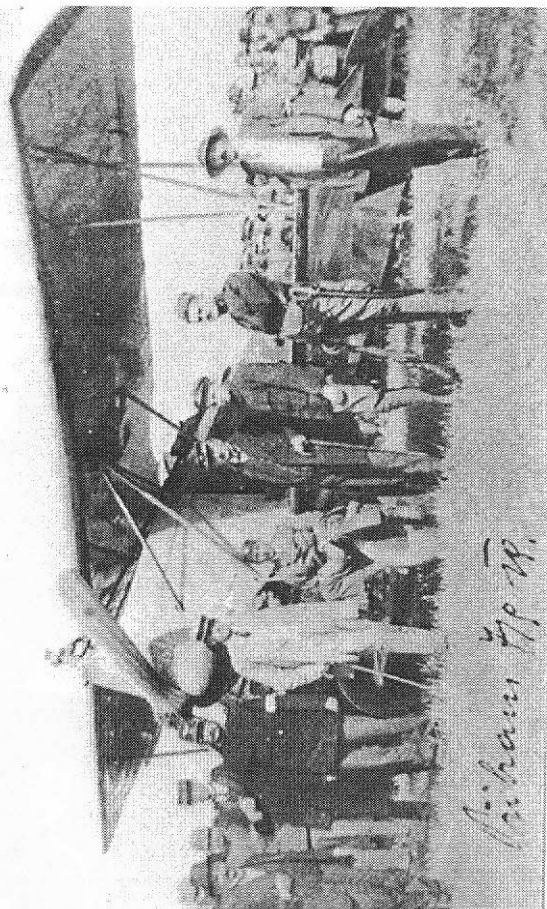
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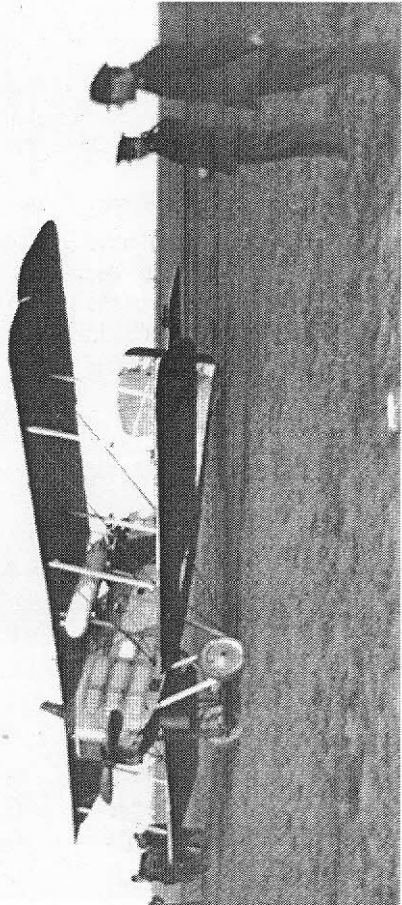


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Richard P. W.

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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

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encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. The results of this research are published in our quarterly journal, the Small Air Forces Observer (SAFO)

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COVER COMMENTS: The first part of the story of the aerial conflict between Czechoslovakia/Slovakia and Hungary begins on page 19. This photo shows members of the newly-formed 1. letecká setnina (1st Air Company). Notice the variety of uniforms: Some airmen wear Italian uniforms (those had been members of the Czech Legion prior to their return home and transfer to Slovakia), others have the first airmen uniforms (a cap badge in shape of flying airplane). The man standing sixth from left still uses an Austro-Hungarian uniform – a small balloon as cap badge worn by members of the k.u.k. Luftfahrtruppen. (Archive Bohumir Kudlicka)

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USA

SKYWAYS: The Journal of the Airplane 1920-1940 (PO Box 730, Red Hook, NY 12571. Website: ww1aeroinc.org. E-mail: subscriptions@worldwar1aeroinc.org. E-mail: ww1aero@gmail.com

No.87 Jul. 2008 (80 pages) "Boeing Model 40B" 8 pages including 10 photos. "Cole Palen's Great Lakes Trainer" 6 pages

including 6 photos and a 3-view scale drawing. "Cockpits: Douglas B-7" 3 pages with 5 photos. "Spirit of St. Louis" 13 pages on unfinished replica including 20 photos. "Moth Major Replica" 7 pages including 18 photos. "After a 76-Year Interlude, the Pleasant H-10 Bi-Plane Flies Again" 5 pages including 10 photos. "My Bücker Jungmann" 4 pages including 4

photos. "Douglas DC-5 Comments" A short letter giving details on the DC-5 in the Dutch East Indies and Australia. "More on the Canadian Gregor FDB-1" A short letter including a photo of CF-BMR in New Jersey. [Ed: For information on the resurrection of Skyways and WWI Aero, see the "magazine" section of this issue of SAFO.]

AUSTRIA

ÖFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

1/10 (40 pages) "Albatros D.III (Oef) für Polen" 5 pages including 9 photos. "Munsteurer-Reicherberg" 12 pages including 26 photos; mostly Luftwaffe training aircraft, but a couple of P-51s that attacked the base on 16 April 1945. "Die unbekannten Kennzeichen: OC-U** - OE-V**" 5 pages including 6 photos and 3 pages of tables.

CZECH REPUBLIC

REVI: Dvoumesicnik a letadlech a leticich. REVI Publications, PO Box 143, Svojsikova 1588, 708 00 Ostrava-Poruba, Czech Republic. E-mail: redakce@revi.cz. Web site: www.revi.cz. Text in Czech and photo captions in Czech and English. Kit & book reviews include a color photo of the box top or cover, & photos of the full size subject.

#63 (56 pages) "Polapená Furie" 2 pages including 5 photos and 2 color profiles of USN F6F-5 Hellcat in Japanese markings. "Messerschmitt Bf 110" 9 pages including 11 photos and 7 pages of outstanding 1/72-scale multi-view drawings. "Kanadský strelec" 5 pages on Billy Bishop and his airplanes including 3 color drawing of his Nieuport 17 and SE.5. "Modely v zaměrovači" 8 pages of reviews.

#64 (56 pages) "Devítka z La Brayelle" 3 pages including 6 photos and a color 4-view drawings of French MB.152. "Sadaaki Akamatsu" 5 pages including 6 photos and 5 color profile drawings [Mitsubishi A5Ma, A6M5, J2M3 (2); & USN Grumman F6F-5] "Flieger-kompagnie 62D (K)" 4 pages including 15 photos Brandenburg C.I, Oeffag D.III, & Ufag C.I). "Republic F-105" 12 pages including 13 photos, 7 color profile drawings, & 4 pages of 1/72-scale multi-view drawings "Modely v zaměrovači" 8 pages of reviews.

#65 (56 pages) "Nová metoda" 5 pages on anti-Diver tactics including 4 photos and 7 color profile drawings [Mustang III (2), Spitfire XIV, Tempest V (2), Mosquito, & Meteor I]. "Fokker B.II" 4 pages including 11 photos & 3 color profile drawings. "Gunshim - Bůh války" 3 pages including 3 photos, 2 color

profile drawings (Mitsubishi A5M4) & a one page 1/72-scale multi-view drawing of the A5M2. "Stihači vichystické Francie" 5 pages including 8 photos & 3 color profile drawings [Vichy D.520 (2) & Hawk H.75A-3]. "Republic F-105" 9 pages with 4-pages of 1/72-scale multi-view drawings, 26 photos of details, & 8 color profile drawings. One page with 4 color profile drawings of Israeli Avia S-199. "Modely v zaměrovači" 10 pages of kit reviews.

#64 (56 pages) "LaGG-3" 8 pages including 5 photos, 9 color profile drawings [LaGG-3 (8) & La-F], and 2 pages of 1/72-scale multi-view drawings. "Ki-61 Hien" 3 pages including 6 photos and 4 color profile drawings. "Avie zvana Mezek v Israeli" 2 pages including 2 photos. "T-2B Buckeye" 9 pages including 18 photos of details, 8 color profile drawings [USN (6) & Venezuela (2)], a color 4-view drawing (Greece), & 3 pages of 1/72-scale multi-view drawings. "Modely v zaměrovači" 9 pages of reviews.

FRANCE

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

#174 Mars-Avril (72 pages) "Francesco Baracca: l'homme du cheval cabré" 12 pages including 30 photos and 4 color profile drawings [Nieuport X, XI, & XVII (both sides)]. "Le Polikarpov I-153: Huitième et dernière partie" 6 pages including 6 photos of reproductions. "L'Hydravion Bloch 480" 12 pages including 27 photos, a color 4-view drawing, and 2 color profile drawings. Also includes 2 pages on the floatplanes: Amiot 150M, LeO H44, NC-410, & LN-10 with 8 photo. "Un Voyage au Vietnam" 2 pages with 13 photos of aircraft (and other military equipment) on display in Ho-Chi-Minh City (F-5A, A-37B, & UH-1H). "Mai-Juin 1940: Ces mystérieux avions 'Italiens' dans le ciel de France" 10 pages with 14 photos and 2 color profile drawings (Fiat BR-20). "Mitrailage sur le Front du Dniepr: Le mission tragique des chasseurs de la 171^A Sq. le 2 Septembre 1941" 4 pages including 5 photos (Macchi C.200). "TSF

et Aviation: Le réglage de tir d'artillerier de 1916 à 1917" 10 pages including photos of French aircraft (Caudron G-4 & Farman F-40) and their radio equipment. "Info-Maquettes & Livres" 2 pages with reviews of 7 kits, one decal set, & 5 books.

#175 Maj-juin 2010 (72 pages) "Le sacrifice d'un groupe aérien d'observation sur Potez 62.11" 10 pages including 13 photos, table of missions, and one color profile drawing. "Les Curtiss H-75 à deux insignes de la 2^e escadrille du GCI/5" 9 pages on Vichy H-75 including 16 photos and 10 color profile drawings. "Francesca Baracca" 9 pages on Italian WWI ace including 19 photos, table of victories, and 2 color profile drawings (Spad VII & XIII). "USSR-Chine 1929: la bataille du rail" 14 pages including 21 photos, map, and 10 color profile drawings [Soviet Fokker D.XI, Polikarpov R-1 {DH-9A} (5) & MR-1 {R-1 on floats} (4)]. "Le Centre d'Aviation Maritime de Carnet 1917-1918" 9 pages on flying Donnet-Denhaut flyingboats on antisubmarine patrols off the Brest Peninsula including 16 photos and maps. "TFS et aviation (3): La révolution électronique de 1917 à 1918" 12 pages on early airborne radio with some magnificent photos of early triodes.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlef Billig, Oranienbamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#28 Februar 2010 (116 pages) "Luftkrieg zwischen Äthiopien und Somalia 1977" 20 pages on the air war between Ethiopia and Somalia including 25 photos [Somali Bu 181, An-24, MiG-15UTI, MiG-21UM, MiG-21MF, & MiG-21bis (2); Ethiopian Canberra (2), F-5A (2), C-119K, C-47, F-5E (4), Alouette III, HU-1, Mi-17, & MiG-23BN], map, 6 color drawings of flags [WSLF, Ethiopia (2), Somalia, & Ogaden (2)], and 4 color profile drawings (Somali MiG-15UTI, MiG-17, & MiG-21MF; and Ethiopian F-5E). "Die türkische Zivilluftfahrt" 28 pages including 18 small b&w photos of early Turkish civil a/c and 92 color photos of current civil a/c. "Kampffjets aus Schweden" 34 pages including 72 photos [Swedish Saab 17

(2), 18 (3), 21A (3), 21R (4), 22, 29 (6), 32 (10), & 35 (8); Saab 35: Finnish (2), Austrian (3), & Danish]. 15 color profiles drawings [Swedish Saab 17 (4), 18 (3), 32 (4), & 35 (2); Saab 35: Finnish & Danish], one color 4-view drawing (J29C), 7 cut-a-way drawings [Saab 21A, 21R, 29 (2), 32, & 35], one scale multi-view scale drawing (Lansen). "Die rumänische Revolution 1989" 26 pages including 35 photos [Il-28 (2), IAR 316 Alouette (2), IAR 330 Puma (2), MiG-15UTI, MiG-17, L-29, L-39, IAR 93 (4), IAR 99, Boeing 707, An-30, MiG-21 (7), MiG-23 (2), IAR 317 Airfox, Mi-17, Mi-8, & MiG-29 (3)], map, 5 color profile drawings (Mi-8, MiG-21R, MiG-23, SA 365 Dauphin, & An-24).

ITALY

JP4 Menslie di Aeronautica e Spazio. Via XX Settembre, 60-50129 Firenze, Italy. Email: jp4@dueservice.com. Website: www.ediservice.it.

Marzo 2010 (100 pages) Color photos: Canadian C-130J, Indian Navy MiG-29K, Iraq Hawker Beechcraft T-6A, Pakistan P-3C, Czech C-295M, & Bahamas Defence Force P.68C. "Vetrani & Musei" 2 pages with 6 photos [Fiat C.29 (2) & Koolhoven FK.51] "Gli splendidi Sikorsky" 6 pages on reproduction flying boats S-38 & S-39 including 14 photos. "Incidenti Militari" one page including 3 photos (RNZAF CT4E, Argentine Schweizer 300C, & Finnish F-18D).

Aprile 2010 (100 pages) "Incidenti Militari" 1½ pages including 3 photos (Brazil UH-1H, Poland C-130, & Philippine OV-10).

Maggio 2010 (100 pages) Color photos: Nigeria ATR 42MP 'NAF 931', Ecuador CN235 'AN 202', & Singapore F-15SG '0010'. "FIDAE 2010" 4 pages including 8 photos (Chile Super Tacano & F-5E, Argentina Pampa, and Brazil A-1A & C-295). "Incidenti Militari" 1½ pages including 4 photos (Polish Mewa 'SN-50YG' & Nigeria G.222 'NAF 590')

POLAND

LOTNICTWO (Krzysztof Zalewski, ul Grochowska 306/310, pok. 206, 03-840 Warszawa. E-mail: kz@magnum-x.pl.)

1/2010 (98 pages) Color photos: Hungary L-39 Albatros, Sweden Kawasaki KV-107, India Hawk Mk.132, Malaysia MB-339, Iraq Beechcraft T-6 Texan II, Vietnam Su-30M, & Czech C-295M. "Sił Obronnych Izraela" 10 pages including

24 photos [Avia S-199, Super Mystere, Vautour, Mirage III, Kfir, Lavi, F-15 (5), F-16 (7), & A-4 (2)]. "Falcon Air Meet 2009" 4 pages including 11 photos [Jordan F-16M (2)]. "Fliegerschissen Axalp 2009" 4 pages including 11 photos of Swiss a/c [F-5E, F/A-18 (2), Alouette III, EC 635, PC-6 Turbo Porter, & PC-21 (3)]. "Pokazy lotnicze po japońsku" 4 pages on Japanese a/c [F-2, T-4, E-2C Hawkeye, P-2C Orion, F-4E (2), C-1A, YS-111, SH-60 (2)]. "Batajnica Air Show 2009" 3 pages on Serbian a/c in new national insignia (MiG-21bis, J-22 Orao, G-4 Super Galeb, Yak-40, Do 24D, An-2TD, An-26, UTVA Lasta 95, Mi-8, & Mi-24). "Muzeum Lotnictwa w Belgradzie" 5 pages including 16 photos [Ikarus S-49, 451, 451M (2), T-451MM, F-84G, F-86D, T-33A, 522, Texan, J-21 Jastreb (2), & J-22 Orao]. "Heinkel He 219 Uhu: Part 2" 10 pages including 15 photos and 6 color profile drawings. "Pluton Lotniczy Warszawskiej Brygady Pancerno-Motorowej we wrześniu 1939" 7 pages including 6 photos [PZL P-23 Karas (3), & RWD-8 (2)]. "Focke-Wulf FW 44J Stieglitz" 2 pages on restored a/c including 6 photos. "Machinohe Air Show 2009" one page with 3 photos of Japanese helicopters (UH-1J, OH-1, AH-1).

2/2010 (98 pages) Color photos: Bulgaria AS532 Cougar, Swiss EC635, Dutch NH90, Brazil AS635 Panther. "F-4G Wild Weasel" 9 pages including 19 photos and a 4-view scale drawing. "Squadron Exchange" 3 pages including 8 photos (Polish F-16 and Spanish F-18). "Centrum Szkolenia Lotniczego w Pardubicach" 5 pages including 13 photos (L-39, Zlin 142, Mi-2, Mi-17, L-410, & EV-97 Eurostar). "Wystawa LIMA 2009" 4 pages on Malaysian AF including 13 photos (Su-30, BAe Hawk, MB339, Pilatus PC-7, Bombardier CL415, CN-235, MiG-29, AS.555, & Super Lynx) and a 2-page poster of Malaysian Su-30. "Siły Powietrzne I Kosmiczne Sił Obronnych Izraela" 8 pages including 21 photos (Israeli F-16, Gulfstream V, C-130, Bell 206, Grob G-120, Beech Bonanza, AH-1, CH-53, AH-64, & UH-60) "Konflikt rosyjsko-gruzinski w 2008 r." 7 pages on the Russian attack on Georgia including 16 photos (Georgian Mi-24, UH-1H, & Su-25 and Russian a/c), map, and table listing Russian air attacks. "Heinkel He 219 Uhu: Part 3" 10 pages including 11 photos (one in USAAF markings and one

in RAF markings), 5-view scale drawings, and 6 color profile drawings (one RAF and 2 Czech). "O polskim generale, polskim samolocie i tureckiej goscinnosci" 8 pages on Turkish P-24 including 17 photos (2 Turkish, 2 Greek, & 12 color photos of P-24 in a Turkish museum).

3/2010 (98 pages) Color photos: Chile C-295MPA Persuader. "Forțele Aeriene Române" 11 pages on Romanian AF including 17 photos [MiG-21 (14) & IAR 99C (3)]. "Suchoj PAK FA polecia" 9 pages including 13 photos, 3 multi-view drawings (PAK FA, MFI 1-42, & Su-47), and poster photo (Suchoj T-50 PAK FA). "Jaskółka z Kawasaki Ki-61 Hien" 12 pages including 21 photos and a multi-view scale drawing. "Lotnictwo bombowe w Europie w 1939 r." 11 pages including 28 photos.

Numer Specjalny 11 (98 pages) "Messerschmitt Me 163 Komet" 14 pages including 20 b/w photos (with one Soviet & 2 RAF), 8 color photos of museum a/c, and 7 color profile drawings. "Niezwykłe bombowce" 8 pages including 16 photos and two 4-view scale drawings (XB-43 & AW.52). "B-29 Superfortress z baz lotniczych w Indiach i Chinach" 10 pages including 18 photos and 6 color profile drawings. "De Havilland Vampire" 15 pages including 25 photos and 10 color profile drawings [RAF (6), Mexico, Dominican Republic, Sweden, Norway]. "Most powietrzny do Afryki" 13 pages on Luftwaffe attempt to resupply North Africa including 22 photos and 9 color profile drawings [German Ju 52/3m (2), Me 232 (3), & Bf 109G; Italian SM.82; USAAF P-38F; and RAF Spitfire VB]. "Pierwsze sowieckie bombowce odrzutowe" 8 pages on first Soviet jet bombers including 17 photos and 3 scale drawings Mjasiszczew DSB-17, Suchoj Su-10, & Iluszyń Il-22). "Niezwykła historia zestrelenia Halifaxa z Banicy" 10 pages on Polish Squadron's supply mission to besieged Warsaw including 21 photos. "W pogoni za Czarownicą i Jaskółką ..." 6 pages on Polish Squadrons vs V-1 including 15 photos and 2 color profile drawings (Mustang III WC-F and WC-V). "Boski Grom atakuje" 13 pages on Japanese suicide attacks including 22 photos, one color profile drawing (Nakajima G8N2 with Ohka bomb), and 4 USN reports on damage sustained from suicide attacks.

A Secret Rendezvous

Frans Scheve

In the autumn of 1990, the opportunity came up for me to visit Laage air base in East Germany. At that time, Laage was the largest and most modern military air base in the DDR. It is located some 25 kilometers south south-east of Rostock, Mecklenburg-Vorpommern, Germany. Before describing my visit and the activities I witnessed there, I want to tell you something about the history of Laage air base.

Laage Air Force Base

In order to build the air base that started as project 8-0-1 or object 801 in 1974, two small villages underwent major changes. The village of Levkendorf disappeared completely. Only a pile of glacial dropstones and two rows of trees mark the spot where the village used to be. In nearby Kronsamp, large concrete housing blocks were constructed to house many of the Levkendorf people displaced by the air base and for the people to be employed at the nearby military airfield. The airfield was to be completed by the end of 1984.

As planned from the start, the air field is located just east of Germany's *Autobahn* A19/E55. In fact, one of Laage's taxiways had a direct connection to this highway. In a worst-case scenario, Laage-based aircraft could use the highway for take-offs and landings. Servicing would be done some kilometers north from the flight line adjacent to the highway – near Kavelstorf village.

Having a direct connection to a highway also had its disadvantages: During the final construction phase of the air base, in December 1984, a western military liaison unit (USA) took a "wrong exit" on highway A19 and found themselves entering the air base. At that time this highway exit did not have a proper gate or guard, and it was Christmas time. (Note 1).

Su-22s Arrive at Laage

During the final construction phase of Laage air base, training and instruction of personnel had begun elsewhere to be ready for the arrival of the MiG-17F. All this was very strange because the MiG-17F was being phased out of the NVA/LSK inventory at that time. In fact, Laage air base was destined, designed and constructed to become home to the – at that time very modern – Sukhoi Su-22 attack airplane.

The Su-22 is a single engine swing-wing jetfighter deriving from the Sukhoi Su-7. The first flight of the Su-7 was in 1955, its NATO code was 'Fitter-A'. In many ways this Sukhoi design can be described as a "Survivor of the Fittest". Over the years it evolved from a basic swept-wing

attack-bomber aircraft into a computerized swing-wing multi-task airplane. Today – over half a century after first flight of the Su-7 – many Su-22 Fitters remain very capable and versatile ground attack aircraft used by air forces on four continents.

With its variable swing-wings, two fixed 30 mm wing machineguns and a flexible hard point configuration of between seven and ten pylons, it can be made ready for almost every task. One very striking configuration were Laage's Su-22s used for aerial reconnaissance. These aircraft were fitted with ECM pods and one huge - 7 meter long and almost 1000 kg heavy – KKR-1TE reconnaissance pod on the centerline of the fuselage. Two single-seat Su-22s of each unit were constantly available in this configuration. Configuring these aircraft also meant that they were not available for other flying operations and even required a special crew and special handling during flight and missions.

In November of 1984, crates with Su-22 parts were delivered at NVA Rothenburg air base by an Antonov An-22. Soviet personnel were flown in to assemble and test fly these first ten Su-22s prior to delivery to the East German air force. When talking to a Rothenburg officer, he described the period as being very exciting. Never before had he seen such spectacular flying.

The Su-22s were transferred from Rothenburg to Laage by East German pilots. At that time the NVA/LSK had about sixteen pilots qualified to fly the Su-22. On December 1st 1984, Laage's fighter-bomber unit JBG 77 was officially established. The rest of the Su-22s were delivered directly to Laage air base by Ilyushin Il-76s. These planes could deliver two Su-22s at a time.

JBG 77 and MFG 28

Laage's runway – positioned in an almost east-west direction – divided the air base into the two units using this base. The northern side of the field belonged to an air force unit, JBG 77 "*Gebhard Leberecht von Blücher*". The southern part was residence to the sole naval jet-fighter unit, MFG 28 "*Paul Wiczorek*". This naval unit was formed August 1985 – under strict secrecy – and it was not until October, four years later, that its existence was revealed during the time of *die Wende* (the fall of the Berlin Wall). An interesting detail is that all service men were issued naval ranks and uniforms during this time; before that time this naval unit officially did not exist. (Note 4).

This late revelation is easy to understand because both units were like twins. Both having been supplied with

twenty-four Su-22M4 ("Fitter K") (Note 5) and four Su-22UM3K ("Fitter G") two-seaters, divided between the two squadrons. Both units used them in a very similar configuration and none of them – as all DDR aircraft, in general – had any unit emblems applied.

Reunification

With the reunification of West and East Germany the matter of combining armed forces became a difficult issue. In view of size, numbers and make of equipment that both armed forces used, the predominant view was towards western equipment. All NVA/LSK aircraft were re-registered according to the West German *Bundeswehr* system. Their former national insignia and registrations were sprayed over and new ones applied. Almost all the East German aircraft ended up in temporary storage concentrated at a few NVA/LSK air bases – Laage being one of them. A few were sent to the USA, UK and France for evaluation, a small number served with the 'new' German *Luftwaffe* – mostly aircraft for transport or SAR tasks like Tu-154, LET-410 and Mi-8. Other types like Su-22 and MiG-29 were of much interest for tactical reasons. (Note 2) Only a handful of Laage Su-22s were used in an extensive testing program by WTD 61 (Note 3). The former NVA/LSK MiG-29s of the type 9-12 and 9-51 received much more attention. Once these "Fulcrums A and B" proved themselves to be a very interesting adversary in NATO training, they quickly were upgraded to types –G and –GT. They even performed at Nellis' Red Flags. At the end of 1994 these MiGs were relocated to Laage forming the first squadron of FW 73. The second squadron of FW 73 was formed by McDonnell Douglas F-4F Phantoms being stationed there in 1997.

The Visit

My welcoming at Laage air base, Tuesday September 25th 1990 was very friendly and easy, especially when considering the uncertain and hectic situation the East German air force was in at that time. After a short briefing and a "water bath drive through" to remove any objects causing possible FOD to the aircraft our visit was continued by driving to the *VSL* of JBG 77. On arrival we immediately were presented with a fly-past of six Su-22s returning from their flying exercise. Remarkable was that they were flying in a formation looking like a figure of seven, a delta formation with one aircraft on port-side of the leader and four on starboard-side. Perhaps this was a practice for a planned twelve ship formation representing the number 77?

When looking back and rewinding the activities that day it is strange to find out that JBG 77 had any flying activities at all that day. The fighter wing MFG 28 flew on Tuesdays and Wednesdays and JBG 77 used Thursdays and Fridays for flying activities. It was common practice

on most East German air bases – having more than one than one fighter wing or having a Soviet air base nearby – that flying dates were prefixed and planned, as were flights and aerial communications. The flying between the several Warsaw-Pact air forces was also very limited. Large exercises and maneuvers were held between the countries but not resembling similar activities held in the West. Nevertheless the Laage based units made relatively many squadron exchanges. First half of August 1989 a few planes of the naval unit (Note 4) visited their Soviet comrades in arms on Chkalovsk air base near Kaliningrad on the Baltic coast. During July 1988 JBG 77s first squadron makes an exchange with a Polish Su-22 unit based on Pila air base and about a year later JBG 77s second squadron did the same. Other exchanges were made with Hungarian and Czechoslovak "Fitter" units.

Being used to Western Europe's divers and flexible military flying at that time it was still difficult to understand that NVA/LSK daily flying time had been prefixed so much and left hardly any time or possibilities for individualism by the pilots or crews. So it seemed.

After the Fall

With the fall of the Berlin Wall in September 1989 the many limitations between both countries fell as well. The once so heavily guarded border crossings became unmanned outposts and were nothing more than drive through facilities without any harassment.

On April 11th 1990 a few pilots of West German air force JaboG 43 started a private journey by car to visit their JBG 77 colleagues in the DDR. It was a brave and unannounced visit, they unaware of what to expect. Their arrival at Laage was much welcomed and made such an impact that a month later a return visit to Oldenburg was made by the East German pilots and their families.

On the last day of June 1990, an official meeting of both fighter wings took place – organized by JBG 77. Sometime during these meetings the idea of finding each other in an air-to-air situation came up. The first aerial encounter by both units was planned for September 20th 1990 but was cancelled because of bad weather that day. The real encounter took place five days later –still having similar weather conditions.

A strong wind from the west brought several rain showers, flying conditions deteriorated and the cloud ceiling reached its minimum. In the afternoon, two JBG 77 Su-22UM3Ks were started to make a weather-flight. A quite normal procedure to determine flying conditions, but such a flight was usually being performed at the start of a flying day. An interesting detail was that the crews had orange flying suits – something only used during maritime missions. The aircraft and crews were Major Urban / Oberstleutnant Weber in #113 and Hauptmann Kruschinski / Oberst Roske in #119. Both planes made a

climb heading west and turned into a north north-east direction after having passed the 12th meridian. Somewhere near the Wustrow peninsula they entered the airspace of the Baltic Sea.

One of the crew members describes the flight conditions as being fit for a return back to base – low clouds, much rain and a bad radio connection to ground control. Then through radio the message came “Hi Guys, we’re coming”. On a reported position latitude, longitude of 54° 40” north and 12° 25” east, both Su-22s were joined by three trainer/attack Alpha Jets belonging to JaboG 43 from Oldenburg airbase, West Germany. The planes and crews were Oberstleutnant Meyer / Major Becker in A-Jet 40+51, Major Freimann / Hauptmann Hansen in # 40+75 and Major Franz / Major Schmidt in 40+57.

After aerial familiarization between the pilots and the two aircraft types from the two countries, several formations were flown between them. At that time taking photo or film equipment onto an East German air base was still strictly forbidden, let alone using them on board. Nevertheless Sukhoi Su-22UM3K #119 was fitted with a private camera behind the windshield and filmed the complete flight from take-off until landing. In this digital age this footage was saved as a six minute long video file. One of the three Alpha Jets acted as photo-plane and took pictures of all formations made by the two parties.

After all photo and film footage had been made, all said good-bye and prepared for the flight back to base as if nothing had happened. Nothing serious had happened indeed, it was just a meeting between fellow pilots and future country-men. The Danish air control - which had monitored the happening from the start - took the matter very serious and telefaxed a message to Oldenburg airbase shortly after, mentioning that a meeting had been taking place between East and West German aircraft over the Baltic Sea, very close to the Dane’s backyard. Neighbors!

Last Flight

In the rainy afternoon of September 25th two Su-22UM3Ks quickly hurried along the northern taxiway towards the runway. Both planes were launched to make a weather flight because of deteriorating flight conditions. The true intension of this weather flight I only learned years later.

Both Laage fighter wings had secretly prepared one aircraft each for a last flight ceremony by applying a special paint job. Secretly, because application of bright paint schemes was still unthinkable until this time. The colors used in both schemes were predominantly blue-yellow-red, the colors of the state Mecklenburg-Vorpommern. Su-22M-4 #798 of MFG 28 was completely re-sprayed in these colors and the complete livery looked much like one large jester. Su-22M-4 #546 had several – more decent – markings applied over the original

camouflage scheme. Dominant color was yellow. Both auxiliary wing tanks were completely yellow with a stylish tiger in black on the side and also in black the date 27.9.1990.

On Thursday September 27th - the day known as last flying day for both fighter wings – many family members and guests were present on the airfield for the last flight. Sadly these two machines never made this aerial event, because the flying over the field was restricted. In fact all future flying activities of the entire NVA had been prohibited the day before. All what remained to both special painted machines was to make some loud afterburner runs along Laage’s SLB. Major Neugebauer also makes a run along the runway using Su-22UM3K #113 but at the end of the runway he had to use the *MiG-Fänger* and his action finally ends in the grass. After engine shutdown he grinningly remarked that he “pulled too late” – meaning extending the brake chute – something seemingly unnecessarily for this occasion. On this memorable day, a relatively short period of just five years of operational Su-22 use by the NVA ended on Laage air base. All flights conducted on September 25th 1990 probably were the last ones the JBG 77 made as true East German air force unit.

Much has changed at Laage since *die Wiedervereinigung* in 1990. At the present time, the airfield is known as Rostock-Laage Airport, an airfield from which tourists are flown to and from their holiday destinations – something unthinkable looking back 20 years. Laage now is also home to *Bundeswehr*’s Fighter Wing 73 “*Steinhoff*”, the first German fighter wing using the Eurofighter.

Modelling, Colours, Markings and More.

If you want to build scale models of the described jets there is plenty of choice in brands, scales, accessories and decals. None of the described planes of the encounter though comes as a complete boxed kit and you will have to search for a model and markings separately.

The 1/72 scale range offers good possibilities to build one of the two-seat Su-22s.

The Polish brand Pantera offers a suitable Su-22UM3K (kit No. 7202). A nice kit is produced by the two cooperating brands Bilek (Cz) (kit No. 50) and Italeri (It) (kit No. 052), which also includes the “heavy” recce pod used by single seat Su-22s in recce configuration. The Polish company Mastercraft issued a kit (No. 00D-175) of the Su-22M-4 which includes decals to finish the model in JBG 77s “Last Flight” scheme. Markings of this “Last Flight” scheme are also available from three decal brands, Aero Master Decals 72-126, Hi-Decal 72033 and Cutting Edge CED72021. The last set includes beside JBG 77 emblem also the emblem and “Last Flight” markings of neighbor unit MFG 28.

The Oldenburg Alpha Jets and Laage Su-22s come in different camouflage schemes. All Alpha Jets delivered to the West German Luftwaffe had the at that time popular splinter camouflage scheme – similar to that used on F-104G Starfighter and F-4F Phantom II. It was a standard scheme - Norm 63 - of large angular patches in the colors RAL6014 and RAL7012, under surfaces being colored RAL7001. Alpha Jet 40+75 still had this scheme at the time of the encounter. Second Alpha Jet 40+51 had a more modern camouflage scheme based on Norm 83B. A standard scheme using the colors RAL 6003, RAL 7021 and FS 34079.

All East German Sukhoi Su-22s had an individual camouflage scheme and pattern - ever since delivery from the Soviet Union. In general five colors were used. All under surfaces were medium blue-grey and the dominant color on side and top surfaces was dark green. Three remaining colors were used to form random patches on the dark green – they were tan, dark brown and medium green. When carefully looking at the camouflage of an aircraft it is possible to identify each plane individually regardless its serial. It is difficult to give exact color annotations for the paints used on these Soviet planes. The colors noted nevertheless are good matches, most colors are semi-gloss and Federal Standard 595 numbering therefore fits in the FS2xxxx range. Please bear in mind that colors mentioned are indications only. When using them on scale models some lighting up might be necessary adding white or light grey pigment. Color numbers preceded by 'Hu-' are matches in the Humbrol model paint range.

light blue grey FS25414 – Hu-65
 dark green FS 24079 – Hu-116
 chocolate brown FS20059 – Hu-98
 tan FS20257 – Hu-63
 medium green FS24097 – Hu-105
 dielectric green FS24110 – Hu-2
 purple brown FS20061 – Hu-177 (+68)
 pale purple tan FS20206 – Hu-121 (+200)
 dark tan FS20219 – Hu-118
 grass green FS24138 – Hu-80
 light blue FS25450 – Hu-47

The markings were pretty much standard for all aircraft and like other aircraft of equal type in service. Registration numbers, unit emblems and Iron Cross in six positions on Alpha Jet 40+75 were in the original large size. On Alpha Jet 40+51 they were sized down to become more low-viz. Both Sukhoi Su-22s had brightly colored black-red-yellow national insignia in six positions and black bort numbers just below the cockpit – all according to NVA/LSK standards, using black numbers for trainers and red numbers for fighters. Not yet standard and only recently (re)applied were the unit emblems of JBG 77 on

the tail of both Su-22s. On portside of Su-22 #119 the front of the unit emblem is missing, like a chipped-off decal or sticker. These unit emblems were placed on a small dark green sprayed-over patch. It looks like the marking had been applied earlier and then being sprayed over later. A photo depicting #113 sometime in July 1990 shows a dark green spot on this exact location but without marking. At the first formal photo shooting organized by the NVA/LSK at Holzendorf June 6th 1990 the JBG 77 was among the first to show a unit marking. This triggered other units to design emblems of their own, but unfortunately time was running out. The emblem of JBG 77 was a stylish combination of its state colours, the aircraft type it used and the unit's name bearer. A black silhouette represents field marshal Von Blücher on a creature half Stallion half Fitter riding on a blue-yellow-red light beam superimposed on a light blue disk. In the bottom half of the disk an orange number 77 is placed.

The red or black bort numbers of the Laage Su-22s were somewhat random. It is written that while determining the bort numbers of each Su-22 special care was taken that the sum of the figures would not add up to thirteen. By determining the bort numbers for MFG 28 someone must have been bad in math because each squadron did have a "13", in the form of #706 and #724. In the inventory of JBG 77 there were also two numbers thirteen. - #613 and #113. When looking at the national insignia applied to #113 I was surprised to see that the yellow center part of the marking had been applied in a mirrored way – not resembling that of the national flag of the DDR. Was it the result of a practical joke or that of superstition or was it just a mistake?

Last Flight

On Thursday September 27th - the day known as last flying day for both fighter wings – many family members and guests were present on the airfield for the last flight. Sadly these two machines never made this aerial event, because the flying over the field was restricted. In fact all future flying activities of the entire NVA had been prohibited the day before. All what remained to both special painted machines to enjoy the crowd was to make some loud afterburner runs along Laage's SLB. Major Neugebauer also makes a run along the runway using Su-22UM3K #113 but at the end of the runway he had to use the *MiG-Fänger* and his action finally ends in the grass. After engine shutdown he grinningly remarked that he "pulled too late" – meaning extending the brake chute – something seemingly unnecessarily for this occasion. On this memorable day, a relatively short period of just five years of operational Su-22 use by the NVA ended on Laage air base. All flights conducted on September 25th 1990 probably were the last ones the JBG 77 made as true East German air force unit.

Today

Today all airframes of the encounter still remain, but find very different purpose. With the fall of the Iron Curtain many NATO air forces slowly reduced their inventory to required levels. During September 1993 JaboG 43 was disbanded and the Alpha Jets found their employment elsewhere. Since August 2000 A-Jet 40+51 (CN0051) is part of the inventory of the educational workshop of *HflgRgt* 15 in Bentlage, Germany. Number 40+57 (CN0057) is flying as an aggressor aircraft for the company Top Aces Inc. participating in Canadian AF training. This aircraft now wears a stunning camouflage scheme in the colors white grey, light grey and sky blue. Aircraft 40+75 (CN0075) also got a very different look being painted in SE Asia colors. It now serves within the Portuguese air force as 15225.

For Sukhoi Su-22UM3K #119 the flying days after unification were over. It was renumbered 25+48 and was stored at Laage before becoming museum exhibit in Rechlin, Germany. Sukhoi Su-22 #113 was renumbered 25+47 and did not end-up in storage right away. All former markings were painted over, the new markings simply consisted of the numbers 25 47 on the nose and a tiny German flag on the tail. No Iron Cross markings were applied. In this configuration it made some additional flights within the new *Luftwaffe*. This aircraft also ended-up becoming a museum exhibit not long after and was moved to the town of Bad Ischl, Austria.

Frans Scheve, (SAFCH #890), The Netherlands.

People I have to thank while compiling this article:

Frank Banish, Jörg Mückler, Helmut Friz, Günter Unruh, Christoph Regel, Martin Philips.

Notes

1. After WW2 Germany's capital Berlin had been divided into four allied sections. East Berlin – and all of East Germany – was controlled by Soviet forces. The area controlled by American, British and French forces was called West-Berlin. In order to reach West-Berlin from 'the West' several traffic routes by air or by road were established. From personal experience I can tell that a deviation from a planned route in the DDR at that time was easily made, especially at night.
2. On August 2nd 1990 the Iraqi army of President Saddam Hussein invaded and annexed its neighbour country Kuwait. The modern Iraqi air force had several MiG-29s and Su-22s in its inventory. In preparation to a military operation to free Kuwait the former NVA/LSK were of much interest to western coalition forces.
3. The unit WTD 61 - *Wehrtechnische Dienst für Luftfahrzeuge*, German Test and Evaluation Center - is stationed at Manching air base in Bavaria where it tests, evaluates and approves flying equipment used by the

Luftwaffe. Interesting detail is that this was not the first time this unit had the opportunity to test-fly and explore this Soviet swing-wing design. During 1985/86 the *Bundesluftwaffe* had two former Egyptian Sukhoi Su-20 ("Fitter C") in its inventory. These aircraft were registered 98+61 and 98+62, the first being used for test flying and the other one for tests on the ground.

4. Until the time of *die Wende* the naval wing was 'low profile'. Whenever news of this unit had to come out it was often described as "Blücher-wing" – named after the neighboring air force unit. A report describing the exchange between a DDR and a Soviet unit mentions the naval unit as 'Mallwitz-unit'. At that time the commanding officer of MFG 28 was *Oberstleutnant* Hannes Mallwitz. (In naval terms *Fregatten-Kapitän*).
5. Both Laage wings were supplied with twenty-four Su-22M4. They lost one single seater each, leaving them 23 at the time of disbandment.

Abbreviations

Bundesluftwaffe – Federal air force of Germany.

Bundeswehr – Federal defence force, German armed forces.

Luftwaffe, air force.

DDR – *Deutsche Demokratische Republik*, German Democratic Republic.

FOD, foreign object damage.

HflgRgt – *Heeresfliegerregiment*, army flying regiment.

JaboG – *Jagdbombergeschwader*, fighter-bomber wing.

JBG – *Jagdbombergeschwader*, fighter-bomber wing.

LSK – *Luftstreitkräfte*, air forces.

MFG – *Marinefliegergeschwader*, naval flying wing.

MiG-Fänger, aircraft crash barrier.

NVA – *Nationale Volksarmee*, national peoples armed forces.

SLB – *Start- und Landebahn*, aircraft runway.

VSL – *Vorstartlinie*, flight line.

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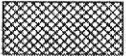


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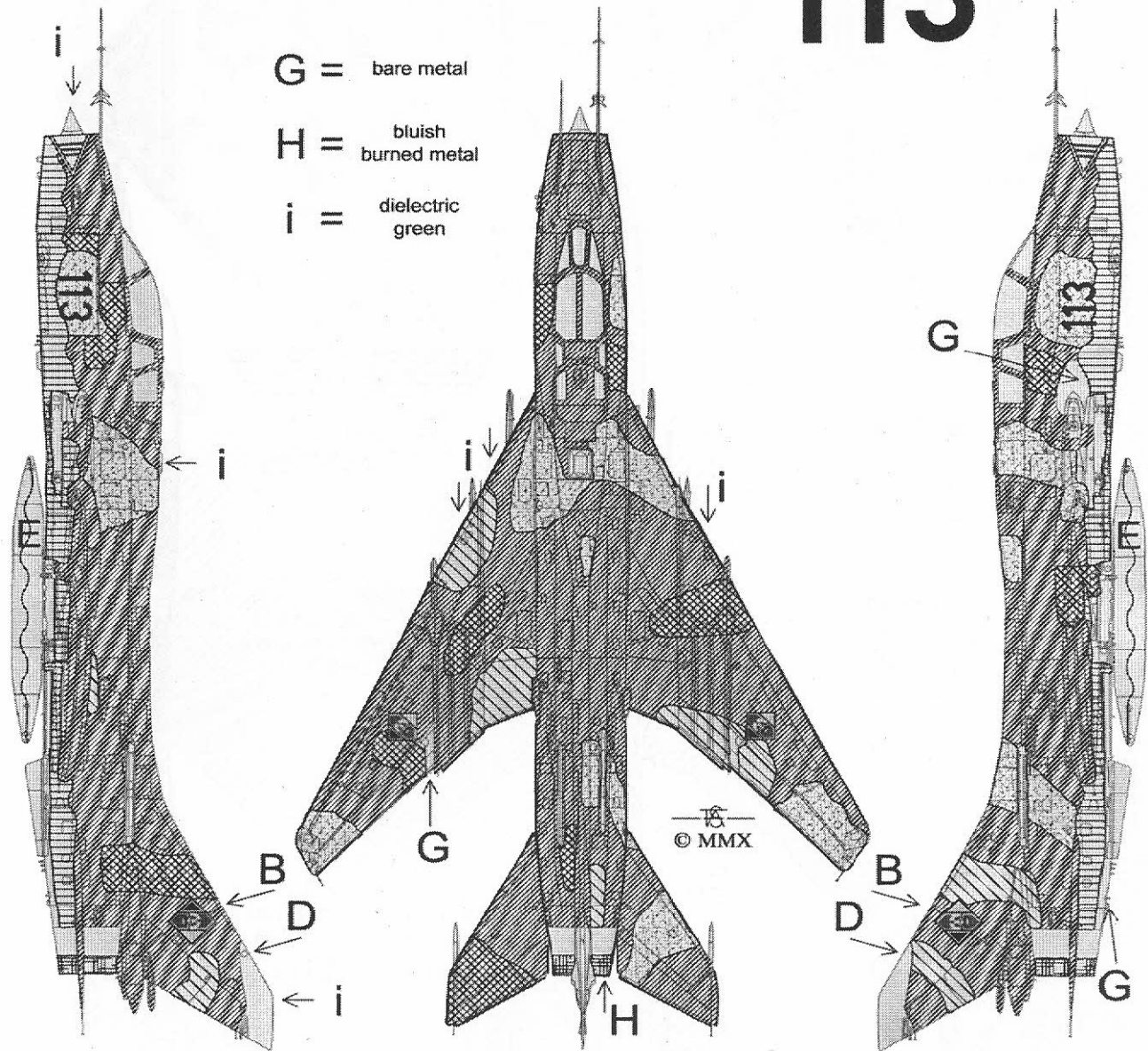
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Sukhoi Su-22UM3K #113
JBG 77 - Laage air base - DDR
25 September 1990

				
light blue grey FS 25414	dark green FS 24079	chocolate brown FS 20059	tan FS 20257	medium green FS 24097

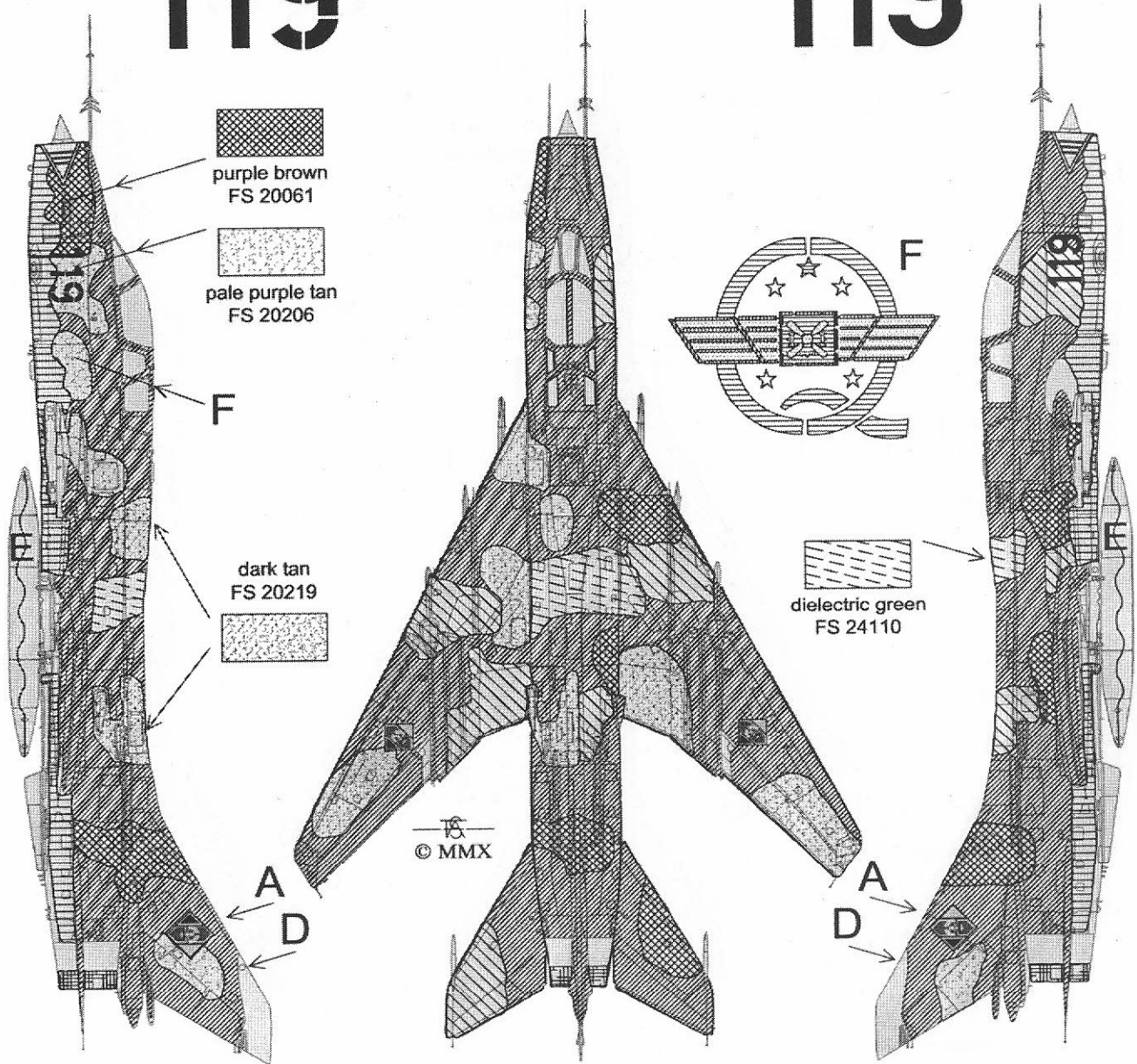
113



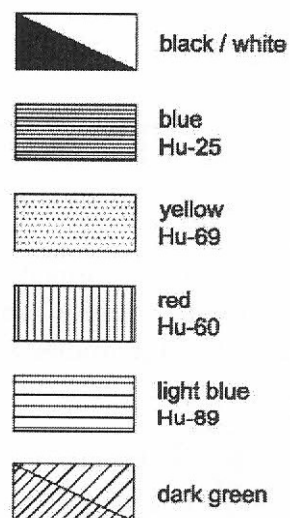
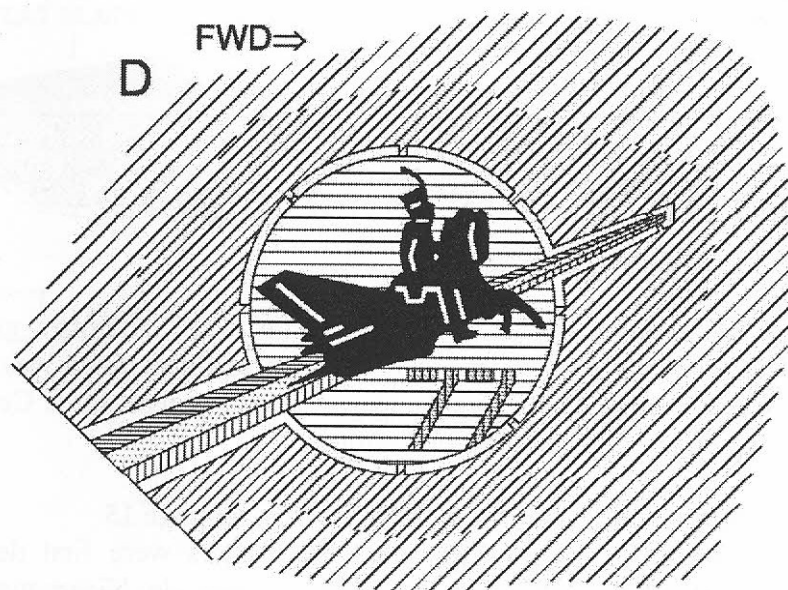
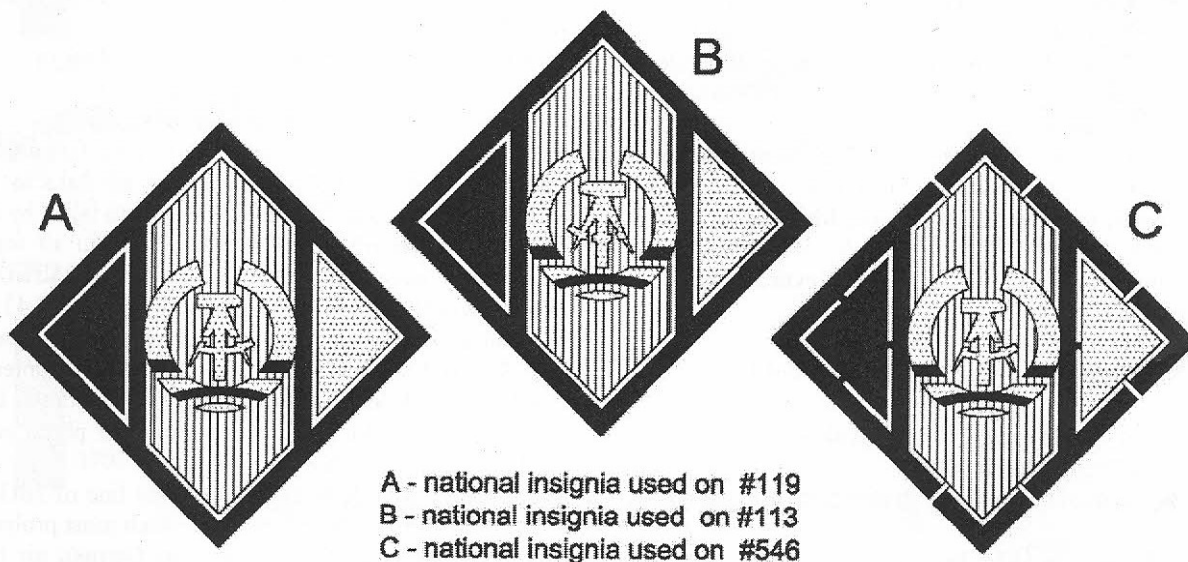
Sukhoi Su-22UM3K #119
JBG 77 - Laage air base - DDR
25 September 1990



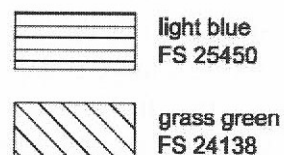
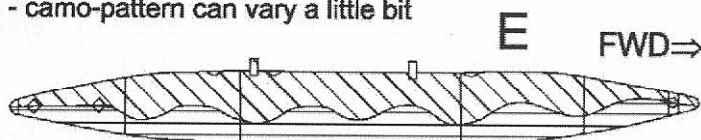
119



Wing emblem and National insignia
 Sukhoi Su-22 "Fitters"
 Jagdbombergeschwader 77 "Gebhard Leberecht von Blücher"



- external fuel tanks of #113 and #119
- colours differ from those used on entire aircraft
- camo-pattern can vary a little bit



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Captions for photos on pages 35-36

1. Sukhoi Su-22UM3K #119 of JBG 77 East German air force hurries along the taxiway of Laage air base in the rainy afternoon of September 25th 1990. (photo taken by author).
2. Two Alpha Jets of JaboG 43 West German air force fly in formation over the Baltic Sea with Su-22UM3K #113. (photo via Helmut Friz of History Group JaboG 43).
3. Mission accomplished. The service crew already starts filling up Su-22UM3K #113 with fuel after the encounter over the Baltic Sea while the pilots carefully climb down from their cockpit while taking special care of their photo equipment. (photo taken by author).
4. Sukhoi Su-22UM3K #119 on the flight line of JBG 77 made ready for its next flight – a flight which most probably never occurred since all flying over East German air bases was prohibited after September 25th 1990. (photo taken by author).

The Cessna 337/0-2 in Nicaragua

Jorge Delgado

From 1961 on, the armed forces of Nicaragua were at war with the guerilla Sandinista FSLN, which led to the defeat of the Somoza regime. The winners disbanded the regular Fuerza Aerea Nicaraguense on July of 1979.

On the 8 September 1979, a new air force was formed by the victorious forces it was named Fuerza Aerea Sandinista (FAS). Only a small number of aircraft were serviceable in Nicaragua after the civil war. Assistance for the FAS came from Cuba and the Soviet Union. A number of Mig-21 were to be supplied from Cuba, but the deal never materialized. During the 1980s, a large number of Mil Mi-8/17/24 was brought in from the Soviet Union. Many of these helicopters were lost in combat against the Contras.

The Contras war took place from 1981-1988 as a

series of clashes against the Sandinista government regulars. The contra paramilitary force was supported by the CIA. They received at least three Cessna's 337 for their operations.

Captions for drawings on page 15

1-Cessna 02 Skymasters were first delivered in 1976 to the Fuerza Aerea de Nicaragua with s/n FAN311 to FAN320.

2-These aircraft were reserialled by the Fuerza Aerea Sandinista with s/n FAS151 to FAS159.

3-Contra paramilitary forces received at least three Cessna's 337 with s/n 1 to 3.

Cap. Jorge Delgado P. (SAFCH #862), Ecuador.

**CESSNAS 337/O2 "PUSH PULL"
SKYMASTER**

FUERZA AEREA DE NICARAGUA

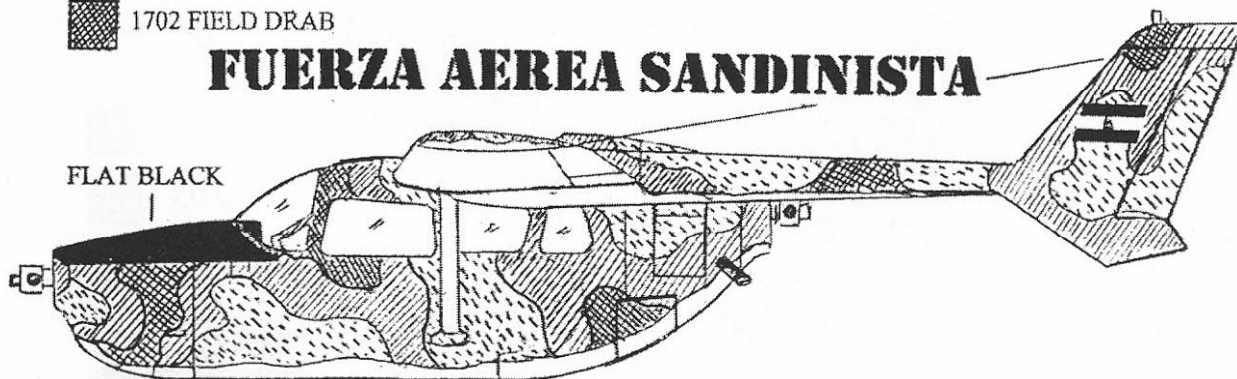


312

- 1742 DARK TAN
- 1712 FIELD GREEN
- 1702 FIELD DRAB

WHITE

FUERZA AEREA SANDINISTA



1722 DUCK EGG BLUE

"CONTRAS"

NUMBER ON WHITE

ENTIRE AIRCRAFT GREEN

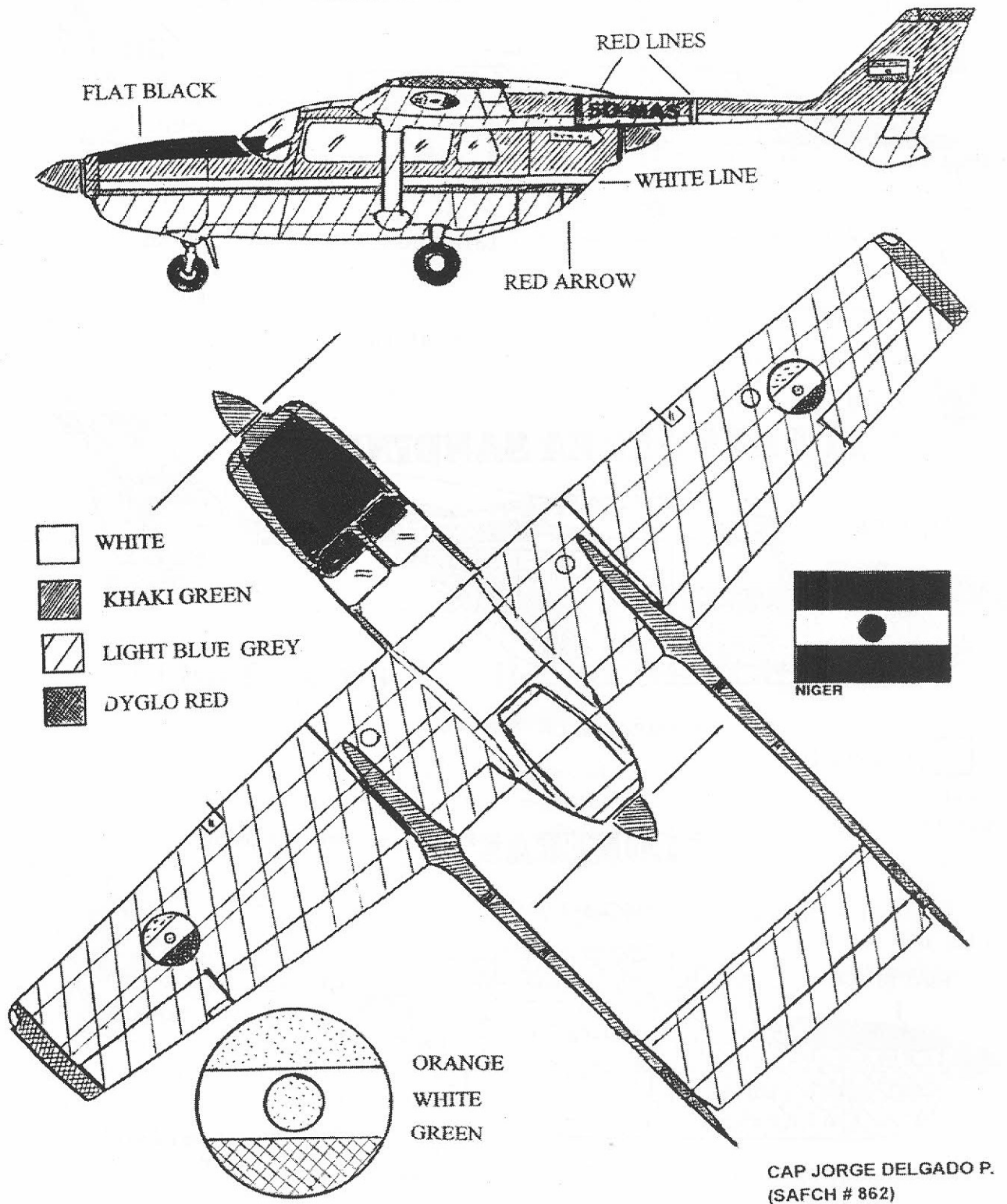


NIGER AIR FORCE

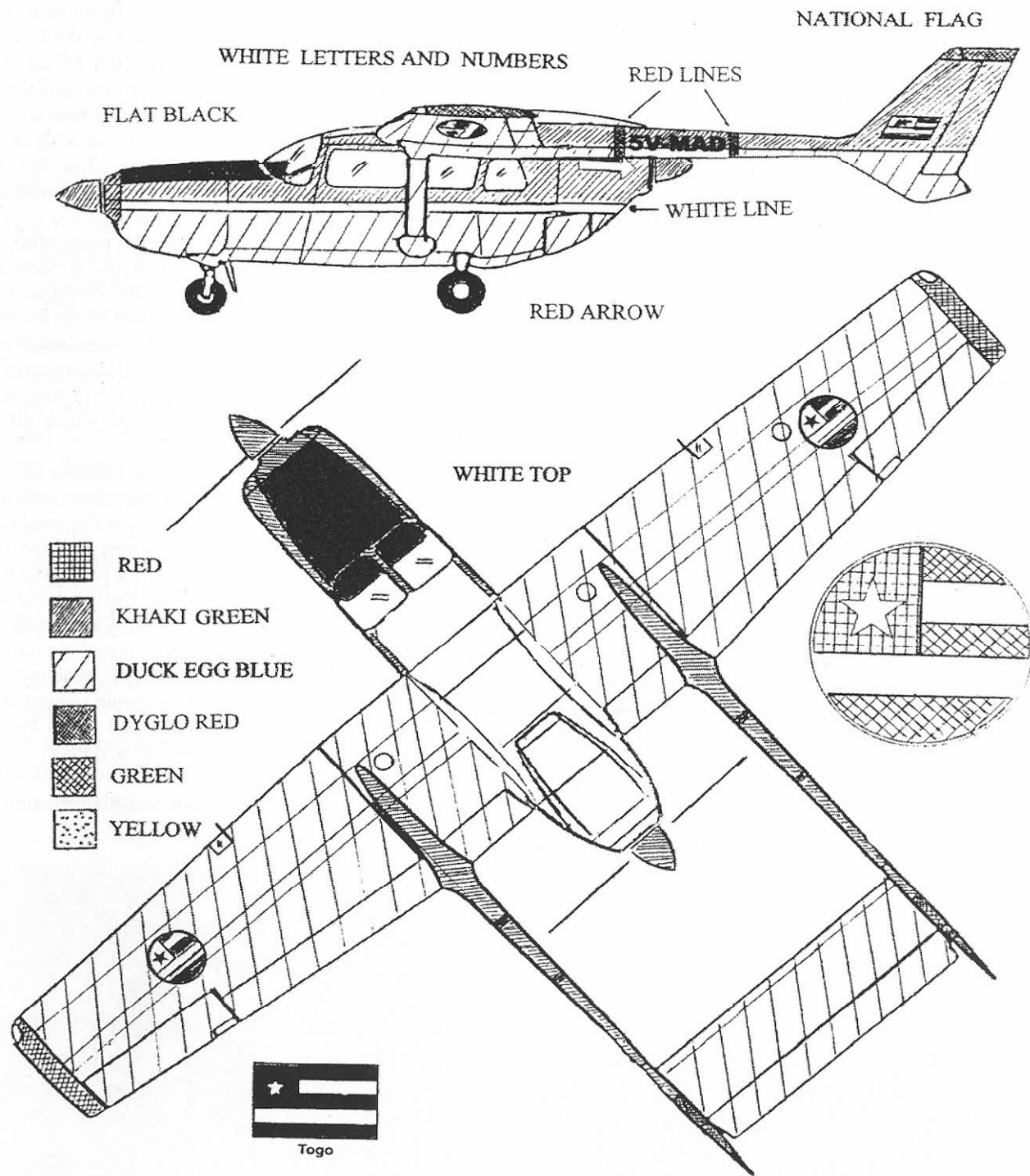
CESSNA 0-2 / 337 SKYMASTER

WHITE LETTERS AND NUMBERS

NATIONAL FLAG



TOGOLESE AIR FORCE CESSNA 0-2 / 337 SKYMASTER



CAP JORGE DELGADO P.
(SAFCH # 862)

Katanga's Lockheed Lodestar

Leif Hellström

The Katangan Air Force (known as the Avikat) operated a motley collection of aircraft. But there was just one type it had only a single example of: the Lockheed 18 Lodestar. It also enjoyed one of the briefest careers of any Avikat aircraft.

Katanga was under United Nations embargo when it came to military equipment and aircraft of any description, including unarmed ones, were difficult to obtain. One of Katanga's few more or less open allies when it came to aircraft supply was Portugal, which provided assistance in a variety of ways. In late 1962, Katanga obtained two aircraft from the colonial airline DETA (Direcção de Exploração de Transportes Aéreos) in Mozambique. One of these was a de Havilland Dove, a type extensively used by the Avikat, while the other was the Lodestar.

This aircraft was built in 1940 as a Lockheed type 18-08-01 with c/n 2052. It was intended for civilian use in South Africa as ZS-ATF but was taken over by the SAAF in 1941 with the military serial 245. In due course the Lodestar returned to the civil register and ended up with DETA as CR-AEP in 1954 flying domestic routes in Mozambique. The DETA Lockheed 18s were withdrawn from scheduled service in 1960 and became surplus to Portuguese requirements.

The Lodestar was procured on behalf of Katanga by Jan Zumbach and his companions, who were in charge of the Avikat at the time. They reputedly paid around USD 21,000 but managed to get USD 68,000 for it from the Katangan authorities. The exact delivery date is not known for certain although 17 December 1962 has been suggested; it was certainly late in 1962. The aircraft was given the Katangan serial KA-131 (not KA-31 as often stated).

An Australian named Charles Kearey, who was an old friend of Zumbach's, was hired to fly the Lockheed. Kearey was selected since he also had a South African passport, which

helped avoid various legal problems when flying in and out of South Africa. As Katanga was hard pressed by the UN by this time, the Lodestar was actually based in South Africa and only made short visits to Katanga. According to one Avikat veteran, the Lodestar only appeared at the Avikat main base at Kolwezi two or three times and never stayed long. It was only used as a transport. The UN, which was keeping a close eye on the Avikat, never discovered the Lodestar's existence while it was still in use.

In early January 1963 the Lodestar and many other Avikat aircraft went into exile in Angola, initially at Henrique de Carvalho, but after being impounded by the Portuguese after a few weeks they were transferred to Luanda. There it stayed. In July 1965 the aircraft was inspected with a view to returning it to the Congo but was found to be in need of major maintenance work beyond what could be carried out either in Angola or the Congo. It was therefore recommended to be struck off charge and sold locally after parts recovery.

During its brief Katangan service, the Lodestar kept its old DETA colour scheme of natural metal and white, with fuselage trim in a light medium blue. The top part of the cowlings may also have been blue or perhaps green. There were no national insignia of any kind. The serial KA-131 was painted in black on the rear fuselage. Most likely the serial also appeared in large black characters on the top of the right wing and under the left wing, even if that cannot be confirmed.

It is possible to model the aircraft in 1/72 scale by using the Special Hobby C-60 Lodestar kit. This would require changing the cowlings and engines since KA-131 had P&W Twin Wasp R-1830s, the same type as on e.g. the C-47 and PBY.

Leif Hellström (SAFCH #786), e-mail: leif@leifhellstrom.com



The Avikat Lockheed 18 Lodestar in exile in Angola in early 1963, after its Katangan markings had been removed. In the right-hand picture, the shadow of the Katangan serial is still clearly visible. (Both via Dave Becker)

Airwar over Ruthenia

Combat between the air forces of Hungary and Slovakia

March 1939

(Part I)

Bohumir Kudlicka & Rudolf Höfling

Background

Before we describe this air war over Ruthenia in 1939, we have to go back 20 years to shortly after the end of the First World War. The Great War changed the map of Europe; some new states were founded and two monarchies went to their end. One of the new states created was the Czechoslovak Republic, proclaimed on October 28, 1918. However, the Czechs and Slovaks, former subjects of the Austro-Hungarian Monarchy, had to fight for their independence. Some months before the end of the Great War, about one hundred thousand Czech and Slovak servicemen went over to the Allies on the Russian, Serbian, Italian, and French fronts. They ultimately joined units of the newly established Czechoslovak Legion which reached 103,234 men in arms by the end of the war. Tomáš Garrigue Masaryk, Milan Rastislav Štefánik, Edvard Beneš, and other leaders of Czechoslovakia based their new state on the activities of the Czechoslovak Legion. The establishment of this new state required the creation of an army, including an air force.

One important task for the new state was to secure its integrity, mainly in those parts with a majority German, Hungarian and Ruthenian population. It took a couple of months before units of the new Czechoslovak Army (reinforced by the Czechoslovak Legion returned from Italy) were able to secure the southern border of Slovakia. On January 1, 1919, Czechoslovakian authority was established in Bratislava, and twenty days later the whole southern border was secured; although cross-border skirmishes continued.

On March 21, 1919 Béla Kun started a communist revolt in Hungary, and his "Red Army" entered and occupied a large part of Slovakia. Only after the Czechoslovak government replaced the Italian General Luigi Piccione by the French General Eugen Mittelhauser did the Czechoslovak Army go on the

offensive. With the help of the diplomatic efforts of the Entente, the "War in Slovakia" ended on June 24, 1919. The French General Pellé subsequently set August 1, 1919 as the date for withdrawal of all Hungarian troops.

The Founding of the Czechoslovak Air Force

The nucleus of a future air force was formed during these border scuffles. 1. *letecká setnina* "Bra" (1st Air Company "Bra") was formed on November 21, 1918 at Maratice in Moravia by *setnik* Jindrich Kostrba. Equipped with only one Hansa-Brandenburg C.I, a former Austro-Hungarian reconnaissance-biplane, the unit moved to Kosice in April of 1919. From there it conducted missions over the eastern border. After reinforcement by two more Hansa-Brandenburg C.I, the unit was relocated to Pezinok in May of the same year. From there it carried out photo-reconnaissance missions over the western border.

2. *letecká setnina*, formed on February 7, 1919, was equipped with two Hansa-Brandenburg C.I and one Nieuport Ni.17. In the following couple of months, this unit flew about 37 missions from Kosice airbase.

The third and last Czechoslovak air unit actively engaged in the border fighting was the fully-French *Escadrille Bre.590*. When it arrived on April 9, 1919, its original purpose was to help with the creation of the Czechoslovak air force. Its equipment consisted of 12 Bréguet Br.14 bombers and two SPAD XIII fighters, and it was led by *Capitaine* G. M. Lachmann. After June 7, 1919 it was based at Vajnory airfield near Bratislava. From there, mostly bombing missions were carried out.

Although the Hungarians had better aircraft, mostly Fokker D.VII, they tried to avoid air combat as much as possible and thus there were not many "dog fights".

The Peace Treaty of Trianon of June 4, 1920, established the border between Czechoslovakia and Hungary. As a result of this treaty, Hungary lost more than half of its territory. Assigned to the Czechoslovak Republic were regions of Croatia, Slavonia, Transylvania, Banat, parts of Burgenland, and a large part of Slovakia. The loss of Slovakia to Czechoslovakia was never accepted by Hungary, and an uneasy peace between the two countries lasted for nearly eighteen years.

[At this point a brief geography lesson may help readers visualize the following events. Czechoslovakia lies along the northern border of Hungary. It comprises of four main regions – from west to east they are Bohemia, Moravia, Slovakia and Ruthenia (also known as Sub Carpathian Ukraine). There is also a very good map on Wikipedia, under “First Vienna Award”, showing the various transfers of territory mentioned in the rest of this article.]

Border Wars Renewed

As the result of the Munich Agreement of September 30, 1938, Czechoslovakia had to surrender 28,291 km² of Sudetenland to Germany. The Hungarian government, led by Nikolaus Horthy von Nagybánya, naturally wanted to profit from Czechoslovakia's humiliation.

October 5, 1938 could be named as “the day of an undeclared short border war between Hungary and Czechoslovakia”; the Slovaks called it “*Malá vojna*” and the Hungarians “*Kis háború*” (“Little war”). On that day a Hungarian army battalion crossed into Slovakia near Rimavská, and a 500-men unit attacked the railway station at Boržava. Shortly afterward, groups of saboteurs, led by officers of the Hungarian Army, started to operate in the Sub-Carpathian Ukraine. Czechoslovakia responded with squads of *Stráž ochrany státu* (State Protecting Guards) and army units. The Letov Š-328 biplanes of 12. and 13. *pozorovací letka*, *Letecký pluk č.3* at Spišská Nová Ves and Užhorod (Ungvár) were sent to attack the intruders. The Letov Š-328 of 12. *pozorovací letka* also took part in skirmishes on October 10 and 12, and aircraft of 13. *pozorovací letka* bombed saboteur assemblies at Aszas near Berehovo at 1630 hours on October 13. The intruders then regrouped near Šalanka where 297 of them were captured a couple of days later.

The *Magyar Királyi Honvéd Legierő* (MKHL = Hungarian Royal Air Force) also deployed its aircraft along the “hot border”. Their aircraft usually penetrated into Slovak territory to take aerial photos of border fortifications north of the Danube River, to drop leaflets, etc. Recorded is an attack on October 22, 1938, on the hamlet of Minaj near Užhorod by Hungarian airmen who mistook it for an airfield. Another incident happened on October 25, when a Hungarian Junkers Ju 52/3m loaded with leaflets and escorted by two Fiat CR.32 of the 1/2 *Vadászszázad* “*Ludas Matyi*” became “lost” approximately 10 km north of the Danube. The Hungarians came across a Letov Š-328 of 10. *pozorovací letka*, *Letecký pluk č.3* flying at about 550 m. The Letov (c/n 237) was piloted by *desátník* Ján Kello with *svobodník aspirant* Jaromir Šotola as observer. Although the Czechoslovak airmen were under strict orders not to fire their guns, one of the CR.32, piloted by 2nd Lieutenant Pongracz, attacked and shot down the Letov. Šotola was killed and Kello suffered light injuries.

About the same time, two Avia B-534 returned from their border patrol with bullet holes in their wings from Hungarian ground fire. The Czechoslovak supreme command reacted with the order that future patrols “had to fly higher”. Unlike the Czechoslovak aircrews, the Hungarian pilots had no restrictions concerning the use of their machineguns and, in the next several months, several opened fire on patrolling Czechoslovak aircraft. However, the action of October 25, 1938 resulted in the only recorded loss during this period.

The territorial claims of the Hungarians resulted in the “*Wiener Schiedsspruch*” (“Vienna Award”) of November 2, 1938. New borders were established and 11,833 km² of southern Slovakia and Ruthenia became part of Hungary.

The resulting demoralisation of the Czechoslovak pilots probably led to *desátník* Ondrej Janata's desertion to Italy on November 14, 1938, when he landed his Avia B-534 (c/n 287) near Tolomezzo in Udine Province. After some negotiations the aircraft was returned to Prague at the beginning of 1939.

Despite the newly established borders, incidents continued and the air forces of both countries naturally took part in them, but no records of aerial losses during this period have been found.

The dismemberment of Czechoslovakia

On the night of March 14/15, 1939, the German chancellor, Adolf Hitler, during negotiations in Berlin, forced the Czechoslovakian government to accept the creation of the *Reichsprotectorat Böhmen und Mähren* (German Protectorate of Bohemia and Moravia). The agreement was signed by the Czechoslovak president Emil Hácha and his foreign minister. The day before, on March 14, 1939, the Slovak State was proclaimed with Jozef Tiso as its president. On the same day Ruthenia's independence was also proclaimed, but on the following day the Hungarian army began seizing its territory.

The Hungarians Invade Ruthenia

The Hungarians made good use of the chaotic and confused situation in Ruthenia resulting from the creation of the new Slovak State. Citing the undefined eastern border of Slovakia in documents of the First Vienna Award from November 2, 1938, units of Hungarian 8th Brigade called *Kárpát Csoport* (Carpathian Group) crossed the southern border of Ruthenia in the early morning of March 15, 1939 and very quickly severed the important railway line from Chust to Presov; the only connection between Ruthenia and Slovakia. On the same day, three bomber squadrons landed on the Debrecen airfield. From Pápa came 3/3 *Királyi Bombázószázad* "*Ságra Vihar*" and 3/4 *Királyi Bombázószázad* "*Sárkány*" equipped with nine Junkers Ju 86K-2. From Veszprém came 3/5 *Királyi Bombázószázad* "*Hüvelyk Matyi*" also equipped with nine Junkers Ju 86K-2. (This unit later became better known as "*Bomba Matyi*" ("Matthias on a bomb")).

The Hungarian bombers were supported by three fighter squadrons equipped with Fiat C.R.32bis. From Borogond to Užhorod and Miskolc came 1/1 *Vadászszázad* "*Ijász*" and 1/2 *Vadászszázad* "*Ludas Matyi*". From Veszprém to Nyíregyháza came 1/3 *Vadászszázad* "*Puma*". Each of these flights was made up of nine Fiat C.R.32bis.

Hungarian reconnaissance units were also repositioned. VI. *Közelfelderítőszázad* "*Csikós*" with eight obsolete Weiss WM-16 "*Budapest*" biplanes was transferred to Debrecen. (Since October 1938 photo reconnaissance flights over South Slovakia had been made by both VI. *Közelfelderítőszázad* and by VII. *Közelfelderítőszázad* "*Kocsonyás beka*", equipped with Weiss WM-21 "*Sólyom*" ("Falcon"),

and also by both independent long-range reconnaissance squadrons of the MKHL, 1. *Önálló tavolfelderítőszázad* "*Merföldes Csima*" and 2. *Önálló tavolfelderítőszázad* "*Gólya*", each equipped with nine Heinkel He 70K (aka He 170A)). After the occupation of Ruthenia, all these units of the MKHL stayed on the mentioned bases ready for the coming conflict with Slovakia.

Germany and Slovakia

When German troops entered Czechoslovakia on March 15, some units crossed into Slovakia and established themselves in the western part of the country. The Slovaks requested a security treaty with Germany and negotiations began on March 17. The result was the so-called "*Schutzvertrag*" ("Protective Agreement") that was imposed on the Slovak government and which greatly degraded the sovereignty of the new state. The agreement, which was eventually signed by the Germans on March 23, provided for a so-called "*Schutzzone*" ("Protective Zone") in the southern part of Slovakia. This territory became subject to military law and within it the Germans confiscated all military property, including 27 aircraft taken from Zilina airfield, from the inventory of 15. *letka*, 22 of which were airworthy. Of the 27, nine were Letov Š-328, and the remaining 18 were a mix of Letov Š-16, Letov Š-128, Avia Bs-122, Praga E-39 and Praga E-241. A further 18 aircraft, 230,000 liters of fuel, and other material was taken from the Malacky's Nový Dvůr airfield.

The Creation of the Slovak Air Force

While all this activity was taking place on its eastern and southern borders, the new Slovak State had established the *Ministerstvo národni obrany* (Ministry of National Defense). *Podpulkovník generálního štábu* Ferdinand Catlos was assigned the task of organizing the Slovak armed forces from those members of the Czechoslovak Army who were Slovaks. Catlos started immediately by setting up the *Letecké oddělení* (Air Department) and appointing major Ján Ambrus as its head thus creating the *Slovenské vzdušné zbrané* (SVZ = Slovak Air Force).

The Slovak government had set March 22, 1939, as the last day for all airmen of Czech nationality to leave Slovakia. However, this date was unrealistic and, in fact, the departure of all Czech personnel was delayed until March 27. All armament and equipment

of the only air regiment located in Slovakia (*Letecký pluk č.3 (generála letce M. R. Stefanik)*), together with units of the *Cetnické letecké hlidky* (Gendarme Air Patrol), became the property of Slovakia. In command of the air regiment were *major* Karol Stojcek and *stábní kapitán* Justin Duran. The property of the aero-clubs became part of the new Slovak civil and sporting air institutions.

At this time, the following aircraft became the property of the Slovak State:

Aero A-11 (5+), A-25 (1), AP-32 (5), A-35 (1), A-100 (16), Ab-101 (2), A-134 (1), A-211 (3), A-230 (3), A-330 (4), and MB-200 (1).

Avia B-21 (1+), Ba-33 (4), B-34 (3), B-71 (1), B-122 (4), Bs-122 (9), B-534 (66) Bk-534 (15), and F.VIIb (1).

Benes-Mráz Be-50 (2?), Be-60 (3), Be-150 (2), and Be-555 (1). Letov Š-16 (10+), Š-128 (5), Š-218 (10), Š-239 (5), Š-328 (101), and Š-616 (6).

Praga E-39 (34?), E-41 (3), E-114 (5), and E-241 (14).

Skoda D-1 (4+).

Tatra Z-131 (1+).

Zlin Z-XII (3 +).

Despite numbering 358 aircraft, this fleet was very mixed and, with the exception of only a few types, the aircraft were technically outdated or not airworthy.

Table I
Slovak Ranks

cetar (Sergeant)
desátník (Corporal)
generála letce (Pilot General)
major (Major)
nadporučik (Flying Officer)
podporučik (Pilot Officer)
podpulkovník (Wing Commander)
podplukovník generálního Stábu (Lieutenant-Colonel)
poručik (Lieutenant)
rotmistr (Warrant Officer)
setník (Company Commandant)
stábní kapitán (approximately: Squadron Leader)
svobodník (Leading Aircraftman)
svobodník aspirant (Lance Corporal)

The Slovak Air Force in Eastern Slovakia

After the departure of the Czech air force personnel, it was necessary to rebuild the Slovak officer corps. This was done partly with personnel coming back from Czech territories. However, the situation remained very critical for the units located at Spišská Nova Ves. After the loss of Užhorod (Ungvár) and Kosice in Ruthenia to the Hungarians, this was the most easterly Slovak airfield. Stationed there was the 2. *perut* *Leteckého pluku č.3* (2nd Squadron of 3rd Air Regiment) commanded by *stábní kapitán* Alois Zmatlo. This squadron consisted of (1) 49. *stihací letka* commanded by *poručik* Ján Prháček and equipped with 10+ Avia B-534, (2) 12. *pozorovací letka* commanded by *poručik* Frantisek Wágner and equipped with 5+ Aero AP-32 and 5+ Letov Š-328, and (3) 13. *pozorovací letka* equipped with ten Letov Š-328.

Despite the relatively large number of aircraft, the number of proficient pilots, like all other Slovak units, remained low. For example, 12. *letka* had nine pilots and six observers, while 49. *letka* had only five men at its disposal.

On March 17 the Hungarians put forward a proposed revision of the border between Slovakia and Ruthenia. This proposal was rejected by the Slovaks.

Part II covering the aerial combat between Slovakia and Hungary will appear in the next issue of SAFO.

vojín (Private)

Table II
Slovak Units

Letecký pluk č.3 (3rd Air Regiment)
2. *perut* (2nd Squadron based at Spišská Nova Ves.)
49. *stihací letka* (49th Fighter Flight)
12. *pozorovací letka* (12th Observation Flight)
13. *pozorovací letka* (13th Observation Flight)
3. *perut* (3rd Squadron based at Piestany)
45. *stihací letka* (45th Fighter Flight)
? *perut* (? Squadron based at Piestany)
37. *stihací letka* (37th Fighter Flight)
38. *stihací letka* (38th Fighter Flight)
39. *stihací letka* (39th Fighter Flight)

Table III Hungarian units

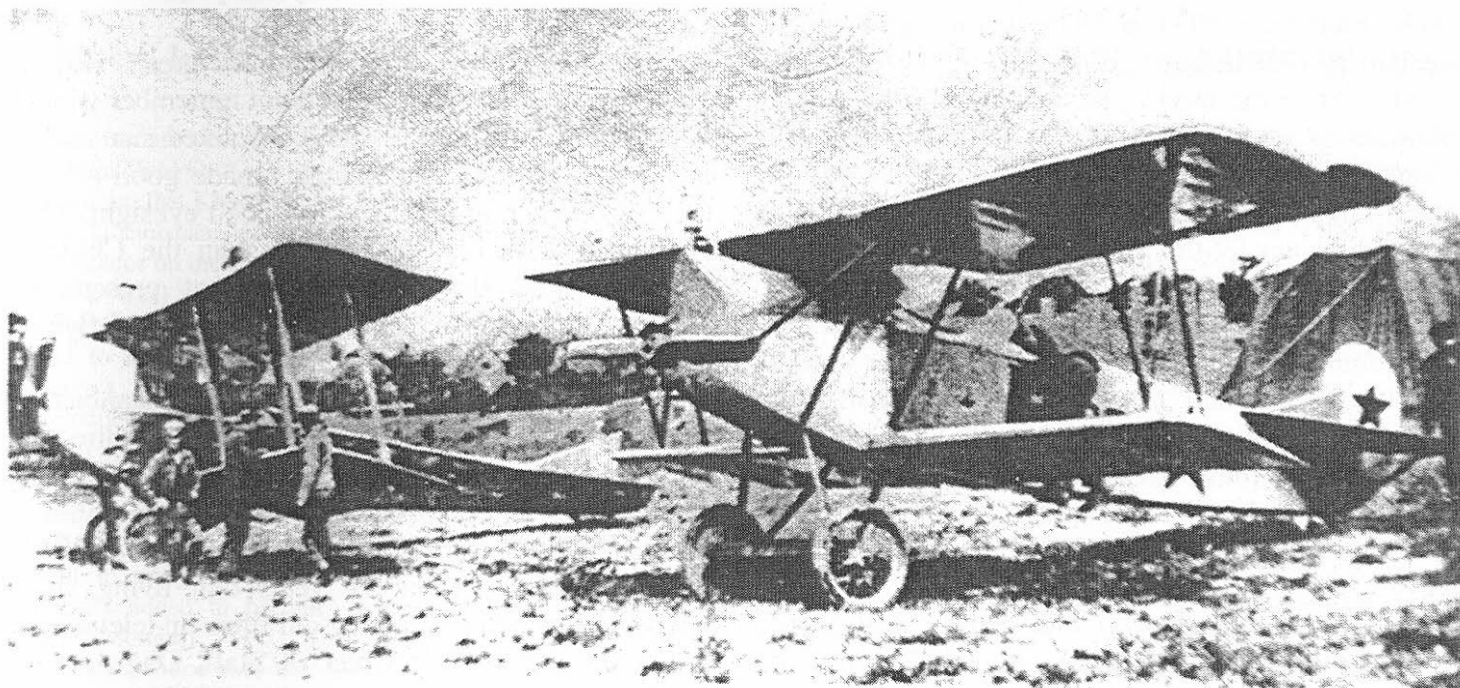
VI. Közelfelderítőszázad (Tactical Reconnaissance Squadron) "Csikos" ("Horseherd")
 VII. Közelfelderítőszázad "Kocsonyás beka" [English translation?]
 3/3 Kyrályi Bombázószázad (Bomber Squadron) "Ságra Vihar" ("Yellow Storm")
 3/4 Kyrályi Bombázószázad "Sárkány" ("Dragon")
 3/5 Kyrályi Bombázószázad "Hüvelyk Matyi" [English translation?]

1. Önálló tavolfelderítőszázad (Strategic Reconnaissance Squadron) "Merföldes Csima" ("Seven Miles Boots")
 2. Önálló tavolfelderítőszázad "Gólya" ("Stork")
 1/1 Vadászszázad (Fighter Squadron) "Ijász" ("Archer")
 1/2 Vadászszázad "Ludas Matyi"
 1/3 Vadászszázad "Puma"

Captions for Photos on Page 2

1/ - Members of 1. letecká setnina (1st Air Company) with a Hansa-Brandenburg C.I in Slovakia in March 1919. (Archive Bohumir Kudlicka)
 2/ - The Bréguet 14A.2 (c/n 8277) of the Aviation Militaire with its French crew shortly after it's landing at Prague-Kbely in spring 1919. (Archive Bohumir Kudlicka)
 3/ - Another Bréguet 14A.2 (c/n 204?) of the Escadrille Bréguet 590 before it's take-off from Vajnory airfield in 1919. (Archive Bohumir Kudlicka)

4/ - After the end of the First World War a number of Fokker D.VII, mostly built in Hungary at the Magyar Általános Gépgyár (Hungarian General Engineering Works Stock Company), were in service with the newly founded Hungarian flying corps. The photo shows the former Austro-Hungarian fighter-pilot Josef Novak, a born Czech, during a little airshow with a Fokker D.VII (M.A.G.) on 7 September 1919. (Archive Laszlo Javor)



During the "Dictatorship of the Proletariat" of the communist Béla Kun, from April to July 1919, the aircraft of the Hungarian Vörös Légjaroscapat (Red Flying Corps) carried mostly red stars as national markings on fuselages and wings. The photo shows a Fokker D.VII (M.A.G.) and in the background a Hansa-Brandenburg C.I, both former aircraft of the k.u.k. Luftfahrtruppen of Austro-Hungary. (Archive Laszlo Javor)

Two Views of Aerial Combat at Khalkhyn gol in 1939

Part I: The Mongolian Side

Denys Voaden

There may be said to have been three reported views of the 1939 battle in the Khalkhyn gol area: the Japanese, the Mongolian, and the Russian, with the latter often subsuming Mongolian cooperation under the heading of Soviet-Mongol forces / Soviet-Mongol operations. This is especially true of action by the air forces. Because the VVS-RKKA was so preponderant in the air fighting, the purely Mongolian effort is almost never mentioned, and information is quite scanty.

It is for this reason that the present writer wishes to give a short account of the Mongols' own activities, obtained from an interview in August 1990 with Zulzagyn Bor, the Mongolian aviation commander at the time of the battle.

Zulzagyn Bor was born in 1916(7) to a cattle-breeding family in Central Gobi. At an early age he was orphaned and was then forced to work, with no home of his own, until he was 18 when he entered the Army. There he spent a year involved with "ten-wheeled armored cars". He did not remember the exact type, but these were most certainly Soviet-made BA-3s, built from 1934 to 1935, examples of which took part in the Khalkhyn gol battle.

After one year service, he was asked if he would volunteer to go to the USSR for flight training. He accepted and was sent to Orenburg [from 1938 to 1957 named Chkalov] in 1936. Here he would fly U-2, R-5 and R-1 biplanes (at that time the I-15 and I-16 were not flown from there). The group of 15 Mongols, which included Zaisanov, later the Mongolian air force commander, stayed at Orenburg for three years.

With the outbreak of hostilities with Japan, Bor was sent directly to Khalkhyn gol, flying an R-5 to Bayan-Tumen [now Choibalsan] and thence to Khalkhyn gol, where he was appointed commander of the 1st assault air *khoro*. His chief of staff was Dagva.

This Mongolian *khoro* had about 20 R-5s of which twelve were usually operational. Because of their vulnerability, they were assigned night bombing missions, there still were losses. One Mongolian crew, who had trained for night flying missions only for a short , became lost on a rainy night and crashed

killing both men. Another R-5 was attacked by a Japanese fighter and the pilot was killed. The observer flew the aircraft back to his base, but later died of his wounds. Some personnel were lost to Japanese machine-gun fire from the ground; these included one of the Soviet advisers. A bomb killed a Soviet adviser, Semenov, on the ground when he was unable to reach a shelter in time. He was 25 years old. His replacement was named Komendatov. Bor himself was wounded, and said that four from his unit (2 Mongols, 2 Russians) were killed.

His unit was visited by Marshal Choibalsan. (1) There were three advisers from the USSR: one for "flights" [flight preparation and tactics?], one for weapons, and one for "controlling" [routes and times?]. Bor emphasized that relations between the Soviet advisers and the Mongolian personnel were very good. They were much liked and highly admired. The Russians provided all needed equipment. He said that the Russians and the Mongolians had separate airfields; those in the Khalkhyn gol region were very simple, cleared by tractors.

The Mongolian R-5s were painted green, with a red or yellow *sovombo* [he could not remember which color exactly] on the fin, and a 5-pointed star under the wings. Bor said that Mongols made good pilots. They were quick to learn and had good eyesight. The Russians regarded them as better than the Chinese fliers. He said that the R-1 was not present at Khalkhyn gol [almost certainly none remained flying at that late date].

After hostilities ended he went to the Ulaanbaatar aerodrome at White Onion Hills and became director of a pilots' school. After leaving the Air Force, he did Central Committee work, and later was a civilian dispatcher until retirement. At the time of the interview he was about 74 years old, living very quietly and enjoying watching old films on television. Of his group, only his Chief of Staff, Dagva, was surviving at the time of the interview (1990).

(1) Khorloogiin Choibalsan [Choi - short "i" - balsan] was the Prime Minister, commander-in-chief of the Mongolian armed forces, and Marshal. He was a

"stooge" of Stalin (had to be) and was very repressive (again probably under orders). Some time (1950s? not sure when) the town of Bayan-Tumen was renamed Choibalsan. I understand he only visited the Khalkhyn gol front when given permission by his

Soviet "controllers. (Google "Choibalsan" for more information about Choibalsan.)

Denys Voaden (SAFCH #1483), USA.

[Editor's note: The above article is the first of Denys' two papers he presented at a conference on the Khalkhyn gol conflict. The second part will appear in the next issue of SAFO. Also see his letter below.

The following information on the conference was provided by Denys.]

"An international Conference to mark the 70th anniversary of the Khalkhin-gol conflict (Nomonhan Incident) was held on August 24-27 2009 at the Mongolian Ministry of Foreign Affairs in Ulaanbaatar. The sponsors were the Defense Research Institute (Major-General Shagbdar); the Administration Academy (Academician G. Chuluunbaatar); and the Border Troops Institute (Col. D. Dashdavaa). Dr. Denys J. Voaden was the United States' participant; the other members were from Mongolia, Russia, Japan, and China.

"Introductory speeches were given

by the attending archivists and researchers. Dr. Voaden explained his interest in Mongolian military history and the course of Mongolian studies in the USA. His presentation on August 25 was entitled "Two views of aerial combat at Khalkhin-gol in 1939" describing interviews with Z. Bor (commander of the Mongolian air component) and two Japanese fighter pilots who flew during the Kwantung Army's offensive.

"A ceremony was held at the G.K. Zhukov Memorial Museum on August 26, which was attended by President Ts. Elbegdorj and Russian President Dmitrii Medvedev. A wreath was presented at the memorial bust of *komkor* (in 1939) Zhukov in recognition of his historic role as architect of the defeat of the Japanese forces in September 1939.

"On the final day of the conference, the delegates traveled by 'bus to Tsonjiin Boldog, east from Ulaanbaatar, to view

the Chinggis Khaan memorial complex with its 40-meter-high stainless-steel mounted statue of the "Emperor of all Men". Discussions took place here and at the nearby tourist centre followed by a closing banquet and speeches.

"The dominant theme of the conference, from the Mongolian Government's view-point, was to define the outcome of the war as an affirmation of Mongolia's status as an independent nation and to fix previously-disputed frontiers.

The goal of the conference was to make known these historical events to younger generations of Mongols whose knowledge of those years might be quite scanty. Hopes are entertained that a permanent research centre for the study of the Khalkhin-gol conflict, open to students of all countries, may soon be established.

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"I was interested to see the short article in SAFO #131 on Mongolian aviation in the Khalkhyn gol battles. I was in Ulaanbaatar last August to attend a conference on the conflict (the Mongols call it a War) and presented a two-part paper on reminiscences from pilots I had talked to in 1964 (Japanese) and 1990 (Mongol). [Editor's note: The first of these papers is presented elsewhere in the issue of SAFO.]

"I have been checking the best way of rendering river name (spelled "khalkh" in Mongol, pronounced "khalkha"), except in adjectival form where "gol" (river) is added to become "Khalkhyn gol" (Mongol) or "Khalkhin-Gol" (Russian). Notice that the Mongols do not seem to use hyphens.

"As for the aviator Zaïsanov: some notes I prepared for an older account read: 'Zaïsanov was an accomplished aerobatic pilot who later flew the single I-

16 delivered to Mongolia. (There may have been three I-16s.) He was a Tatar who had been adopted by Mongolian Kazakhs, married a Russian gypsy woman, and had two children. He was not promoted beyond major because of opposition by Tsedenbal, and died in 1967.' I must try to get firmer details, as 'Tatar' is a bit vague, though I fancy he was born in Mongolia, not the USSR. No one ever told me he was a Buriat, and eventually he was promoted to the rank of general.

"When he left aviation, he did Party work and was a tractor driver on a farm, and lastly lived alone in a small house near Mt. Zaisan south of Ulaanbaatar where he died."

Denys Voaden (SAFCH #1483), USA.

"The article on Greek Wellingtons in SAFO #132 brought to mind some notes I made in 1947. I served most of that year and part of 1948 with the British Army in the Suez Canal Zone, at Fayid. To the south, part-way to Suez, two dumps of discarded aeroplanes and spare motors were held by No. 107 MU (Maintenance Unit) at Royal Air Force Station Kasfareet.

"On August 3 of that year, I 'spotted' the following Baltimores (ex A-30) assumed 'Greek' from the blue/white/blue roundels: FW 844 yellow 'B' A-30A-30-MA 43-9001; FW 788 'F'; and FW 429 'E'. These three were on the larger 'southern' dump. On a smaller 'northern' dump: MK 314 and MH 558.

"There were 380+ aeroplanes at 107 MU - undoubtedly reduced to scrap later!

Denys J Voaden (SAFCH #1483), USA.



Bell UH-1D/H & 205A, by Juan Carlos Cicales & Santiago Rivas. En Argentina Nº 4. Series editor: Jorge Félix Núñez Padin. E-mail: jfnpadin@yahoo.com. 44 A-4 pages in landscape format. Softcover. (2010).

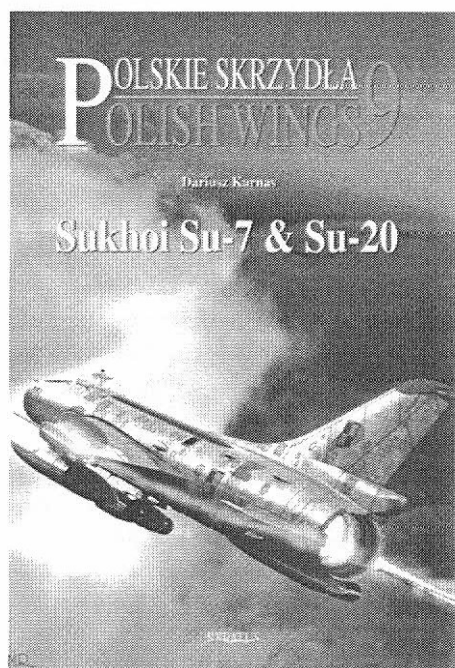
I'm not much of a fan of helicopters (autogiros yes, Helicopter no), and, in particular, I've always thought the Huey was bland. However, it is surprising how a well-illustrated book can change one's mind. En Argentina Nº 4 covers the Huey in operations with the Argentine Fuerza Aérea, Ejército, and Armada. The book is in the usual excellent format of Jorge's series: a multitude of color and black/white photos and color

profile drawings well-reproduced on high-grade paper of Kodak quality. The text is entirely in Spanish, but tables and illustration need no translation.

There are 26 color photos and 54 black/white photos of the complete aircraft and 18 color photos of interior detail and weapons. Pride of place belongs to the color profile drawings: A two-page spread (remember this is a landscape format so the profile is BIG) of a UH-1H as seen at Puerto Argentino/Islas Malvinas, May-June 1982 during the Falkland War. In addition there are 8 color profile drawings and one 3-view color drawing. Seven of these are of Hueys in various camouflage schemes; the other two are a bright blue and white UH-1HP of the Ejército in 2009 and an overall orange Bell 205A of the DINES (Dirección Nacional de Emergencias Sociales) in May 1974.

Because of the large number of Hueys used in Argentina, the authors forego the aircraft by aircraft histories associated with previous publications in this series. Instead there are 4 pages of table giving the a synopsis of each aircraft – 16 Bell UH-1H-BF en la Fuerza Aérea, 70 Bell UH-1H-BF y Huey II en el Ejército, 7 Bell 205A-1 en el Ejército, and 8 Bell UH-1-BF en la Armada.

This is another excellent book from the stables of our friend Jorge Núñez. It is highly recommended to all Huey lovers and to everyone interested in Latin American aviation. This book is available from the SAFCH Sales Service for \$17.00 in the USA and \$20.00 elsewhere.



Sukhoi Su-7 & Su-20, by Dariusz Karnas. Polskie Skrzydła / Polish Wings #9. 56 A-4 size pages. 184 illustrations. Softbound. (2009) Published by Stratus,

PO Box 123, 27-600 Sandomierz 1, Poland.

E-mail: office@stratusbooks.com.pl Website: stratusbooks.com.pl

Don't let the series title, Polskie Skrzydła / Polish Wings, confuse you. These books are entirely in English – text and captions. The Polish service of each type is described in text and tables.

Some interesting anecdotes I learned from the text: "On 14 July 1970 a Czechoslovak Su-7BK1 was intercepted by a pair of Polish MiG-21PFMs of the 11th Fighter Aviation Regiment (11PLM) based in Wrocław. One of the pilots, kpt. Henryk Osierda, had to change aircraft immediately prior to take-off. In the heat of the exercise, due to lack of another flight-ready MiG-21, the pilot was ordered to take off in a QRA aircraft. The MiG-21 was armed with two live R-3S ('Atoll-A') missiles. The pilot of the interceptor forgot the critical fact that instead of training pods his aircraft carried live weapons and fired a well-aimed missile into the Czech Su-7. The

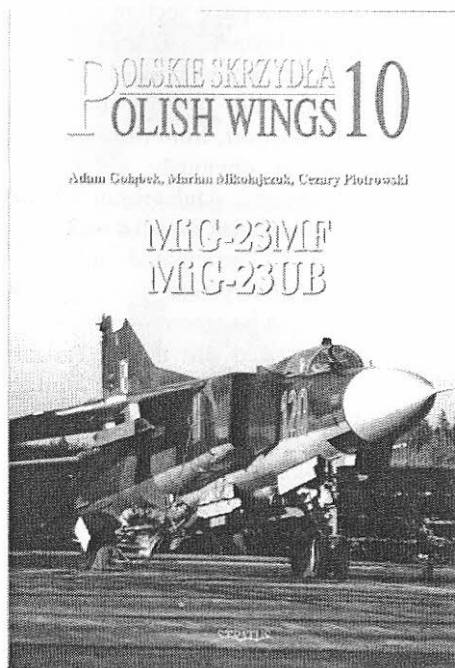
Czechoslovak pilot ejected safely from his aircraft." "On 17 May 1984 kpt. Andrzej Pawul hit a stork in mid-air. With his face injured by pieces glass and his eyes 'stuck' with the remains of the bird he managed nevertheless to land safely at Powidz. For this feat he was awarded the 'Distinguished Military Pilot' badge."

However, what follows this text is, in my experience, truly unique: Each individual aircraft is illustrated with one or more of photos and color drawings. The photos are in both color and black/white. The color drawings are in profile for aircraft with natural metal or silver finish, with generic plan view drawings to shown the placement of the national insignia. For camouflaged aircraft, there are port and starboard side view drawings, and generic top and bottom view drawings. While all the Su-7s were not camouflaged, the Polish Su-20s, while carrying similar patterns, three different color combinations were used.

These colors are identified by their FS595 equivalents.

The statistics for this book are staggering: Su-7BM (6 aircraft) 7 pages, 13 photos, and 5 profiles; Su-7BKL (31 aircraft) 11 pages, 31 photos, and 8 profiles; Su-7U (8 aircraft) 5 pages, 12 photos, and 4 profiles; Su-20 (27 aircraft) 25 pages, 52 photos, 33 profiles, and one plan view. In total, the 56 pages contain 185 photos and drawings. These photos and illustrations are well-reproduced on high-quality glossy paper.

This book is highly recommended for anyone who likes Russian jets, the Post WWII Polish Air Force, or just a well-illustrated book on aircraft.



MiG-23MF & MiG-23UB, by Adam Gołabek, Marian Mikołajczuk, & Cezary Piotrowski. *Polskie Skrzydła / Polish*

Lockheed Hercules Production List 1954-2012, 28th Edition, by Lars Olausson. Available from Lars Olausson, Örnuddevägen 234, S-530 32 Sätenäs, Sweden. E-mail: larsolausson@telia.com. 168 pages. Spiral bound. Europe: £10.00 €12 or US\$16. Worldwide: US\$18 cash, airmail included.

The format remains the same, but Lars has updated it to include aircraft scheduled for delivery in 2012. To illustrate the depth of coverage, consider the most recent C-130 destroyed: c/n

Wings #10. 80 A-4 size pages. 254 illustrations. Softbound. (2010) ISBN 978-83-61421-05-4. Published by Stratus, PO Box 123, 27-600 Sandomierz 1, Poland. E-mail: office@stratusbooks.com.pl. Website: stratusbooks.com.pl.

Don't let the series title, *Polskie Skrzydła / Polish Wings*, confuse you. These books are entirely in English – text and captions. Each type is described in text and tables. Each individual aircraft is illustrated with one or more of photos and color drawings. The photos are in both color and black/white. The color drawings are in profile for aircraft with natural metal or silver finish, with generic plan view drawings to shown the placement of the national insignia. For camouflaged aircraft, there are port and starboard side view drawings, and generic top and bottom view drawings.

The text contains a very complete description of Mi-23 operations with the Polish Air Force. It includes descriptions of every MiG-23 accident. For example: "The next MiG-23 to be lost, the third written-off in a flying accident, was no. 105. Ppor. Zbigniew Krupa took off on Tuesday 13 November 1985 at 13.50 to intercept a target imitated by another MiG-23, flew at an altitude of 6,000 metres by kpt. Jerzy Bekus. At 14.16 ppor. Krupa reported successful interception at about 1,150 metres, and then made a sharp 180° turn to starboard, to leave the interception zone., At about 700 metres the pilot realized he was losing height rapidly and started to recover the aircraft from its dive, but the speed was too high at about 1100 km/h and the pilot was not focused enough to get the machine back to level flight. The

aircraft stalled and crashed at Koczala, killing the pilot. This was the first of two fatal crashes on the type throughout the MiG-23 career with the Polish Air Force."

The Polish MiG-23 carried a variety of color schemes. They arrived in Poland in the factory finish of overall silver. "In the second half of the 1980s the Slupsk-based MiGs started to undergo overhauls, initially those were carried out abroad, in Dresden (East Germany), Plovdiv (Bulgaria) and Chuguev near Kharkov (USSR). All the aircraft returning from these overhauls were finished in disruptive camouflage. ... Each received a different paint scheme because 40 variants of camouflage patterns had been developed in the USSR, depending on the intended zone of operation! ... Polish MiGs were given paint finishes ranging from those for Central Europe to desert ones." The camouflage scheme from each of the overhaul plants are described in detail (including FS595 equivalents) and illustrated in color 4-view drawings.

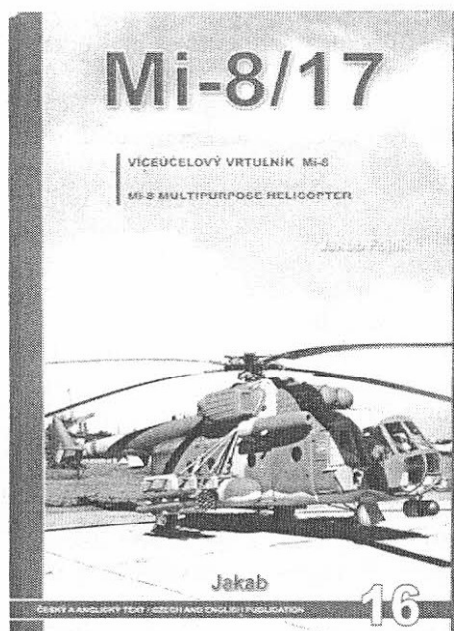
MiG-23MF (36 aircraft) 56 pages, 171 photos, 16 profiles, 3 two-views, and 4 four views. MiG-23UB (6 aircraft) 12 pages, 36 photos, 6 profiles, and one four view. There is a grand total of 254 photos and illustrations (including 44 unit badges). These photos and illustrations are well-reproduced on high-quality glossy paper.

This book is highly recommended to anyone interested in the post-WW2 Polish Air Force and to the modeler trying to make sense of the camouflage schemes carried by MiG-23s.

5497 of the Italian AF was lost on 23 November 2009. Referring to the "Production List", you will find that c/n 5497 was a C-130J delivered to AMI April 2000. "Contract 9803. 46-21 (0002 LMAS, 0003 46-21, MM62176 LMAS. AMI 000819, 46-41 (0408, 0608 KC-130J, 091123 cr after take-off fr Gal Galileo AP, Pisa)." The "Abbreviations" section reveals that "AMI" = Aeronautical Militare Italiana and LMAS = Lockheed-Martin Aeronautical Systems (9503-0001).

The main value of this book for the small air forces enthusiast is the section on "Government Operators". By referring to this section, you can find the c/ns of all C-130 operated by a country of your choice. Then go to the "Production List" to find all about their C-103s.

The "Lockheed Hercules Production List" is available from the SAFCH Sales Service: \$18 for the current edition and \$10 for older editions.



Mi-8/17 Multipurpose Helicopter, by Jakub Fojtik. A Jakab Czech and English Publication #16 112 A-4 pages. Hardbound. (2008) ISBN 978-80-87350-00-3. Published by Jiří Jakab, Nevojice 144, 685 01 Bučovice, Czech Republic. E-mail jakab@razdva.cz.

This book starts out with the statement: "The Mi-8 helicopter is probably the most known, most widespread, and most produced helicopter in the world." The Mi-8 made it maiden flight in 1961 and it is still being produced – some 11,000 Mi-8/17 have been built in 100 different variant. It has been used by 100 different countries.

The author then proceeds to describe in detail all 100 variants. Some examples that caught this reviews attention were:

"Some Mi-8Ts were converted into psychological warfare helicopters, unofficially designated either the Mi-8G, or Mi-8GG (gromkogavorytel for loudspeaker). These helicopters used ZSVS broadcast units with loudspeakers mounted on external weapons racks. These helicopters could still carry unguided rockets on internal racks. A broadcast operator played carefully selected recordings (mostly prepared by intelligence officers from evidence provided by captured enemy or deserters) which were used to psychologically demoralize enemy forces."

"Another ECM version, the Mi-8PP (postanovschik pomekh for ECM aircraft) was designed for jamming target designation radars. It was equipped with the 'Polye' jammer system, a system less effective than the Smalta and with a different functionality. External differences included a dimensional array of six cross-shaped dipole aerals mounted on the aft fuselage, and the absence of both the window aerial sets."

Unfortunately, the author does not describe the service and combat use of the Mi-8/17 (with the exception noted below). However, there are ample photos many of them of Mi-8/17 operating with a small air force: There are 96 photos in all (72 black & white, and 19 in color). Photos of small air force Mi-8/17 include: Afghanistan 2 b&w and 3 color), Algeria (1), Azerbaijan (1 color), Bulgaria (1), Finland (1), Georgia (2), Israel (1), Kampuchea (1), Kyrgyzstan (1), Latvia (1 color), Lithuania (2), Pakistan (1), Peru (1), Poland (2),

Romania (1), Slovakia (5), Sri Lanka (1), Turkey (2 civil), Ukraine (1), and Yugoslavia (1).

Disappointing is the number and choices for the color profile drawings: There are only 5 color profile drawings: Czech Republic (1), Soviet (2), Ulan Ude (1), and Vietnam SAR. There are 2 pages of scale 6-view drawings – one page each for two (unidentified) variants. A 2-page table lists Country, Variant, Date entered Service for 100 military users. A similar table includes the same data for 81 civil operators.

Of course, the great disappointment of this book is the author's objective to cover the technical aspects of the Mi-8/17 series to the neglect of its service history. However, a final 6-page section is titled "Mi-8 War Employment". Unfortunately this is without an English translation, and the publisher tells me none is forthcoming. However, from the 6 photos included, this is obviously about the Soviet invasion of Afghanistan. This section also includes a list of 33 "Conflicts Mi-8 Participated in" No translation is necessary here.

This book can be recommended only for those interested in the technical details of the Mi-8/17 family. It's a pity, because everyone else will miss the wonderful photos of the Mi-8/17 in service with the small air forces. The review copy is available from the SAFCH Sales service for \$25.00 in the USA and \$30.00 elsewhere.



Mirage III EBR-DBR na Força Aérea Brasileira, by Paulo Fernando Kasseb (ZLC Comunicação e Marketing Ltda.,

Rua Constância Colalilo, 667, Vita Augusta 07024-150 – Guarulhos – SP December 2008, ISBN 978-85-62172-00-7)

It is a source of enormous pleasure to this writer to see the abundance of extremely well researched, comprehensive and beautifully packaged aviation history monographs emerging from the present generation of aviation historians in Latin America. Paulo Fernando Kasseb has now brought us this 1st edition of a 121-page, soft-bound monograph in full color, dedicated to what I am now forced to admit was a first-generation supersonic jet fighter

which has now come and gone in FAB service.

This beautifully crafted 8 ½ by 9 ½ inch monograph is all the more attractive to SAFO readership in that Paulo has engaged the foresight to present the text and photo captions in both Brazilian (Portuguese) and English, which is very much appreciated, and which will certainly render it a far more durable resource going into the future.

Paulo begins his narrative with a review of fighter aviation in Brazil, and the reader is thrilled to see previously unpublished images of a SPAD S.VIIC-1 in Brazilian Army colors, a quartet of Curtiss P-40Ns of the poorly documented

1°/14° GAv, a wonderful line-up photo of FAB Gloster Meteor F.8s facing a line-up of Lockheed F-80Cs, and many others. An in-flight formation photo on page 31 shows an April 1974 photo of examples of the FAB's Meteor F.8, EMBRAER AT-26 Xavante, Lockheed TF-33A and F-103E Mirage flying together – a fascinating quartet if there ever was one!

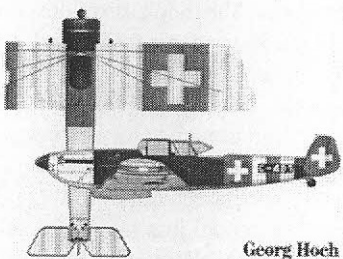
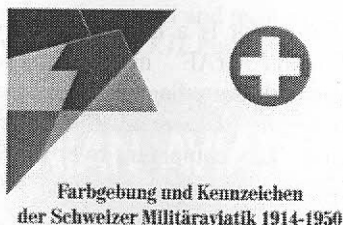
The selection of color photos of operational FAB Mirage aircraft are numerous and very well reproduced, as are excellent unit insignia presentation. There are also a host of color side view drawings showing the evolution of FAB

colors and markings for their Mirage fleet, a review of literature relating to the type in FAB service, and perhaps most stunning of all, a beautiful color in-flight photo of F-103E FAB 4922 wearing the commemorative 30th anniversary color scheme, which should be worth the price of admission to modelers everywhere. There is also a chapter devoted to close-up color images of the aircraft showing, amongst other things, the instrument panels, gun port, cockpit seat, engine details and undercarriage bays. A chart on page 116 describes the fate of each and every aircraft which, unbelievably,

only numbered a total of 32 aircraft in FAB service. There is also a very nice Glossary of terms which decodes the often mystifying FAB acronyms.

I encourage SAFO readers to support Paulo's wonderful contribution to our joint literature. You will find this exactly the sort of document that we have all yearned for over the years, and we can only hope that Paulo will follow this with other similar volumes dedicated to some of the other classic aircraft operated by the great FAB.

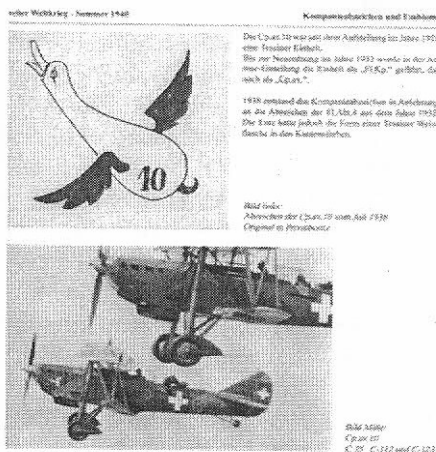
Dan Hagedorn (SAFCH #394), USA.



Farbgebung und Kennzeichen der Schweizer Militäraviatik 1914-1950, by Georg Hoch.

"It is a great book dealing (as is self evident from the German title) with markings and colours of the military aircraft of Switzerland between 1914 and 1950. There are lots of B & W and colour pictures, studies of unit, personal and technical markings, colour plates of main types (and some lesser known too, including belligerent aircraft landed in Switzerland) and so on.

"It is entirely in German with no captions in English so you'd better know Goethe's language if you want to fully enjoy it. It can be ordered at: <http://www.georg-hoch.ch/>. Georg Hoch speaks English so that he can deal with orders made in English."



Jean-Yves Goffi (SAFCH #427), France.

[Editor's note: A friend in Uruguay called my attention to this series of books published by Harpia Publishing. Although I haven't seen these book, the descriptions on their website appears to be free of the usual exaggerations, so I've reprinted these below. For ordering information, contact: US & Canada: Linden Hill Imports, PO Box 543, Crugers, NY, 10521, USA. E-mail: contact@lindenhillimports.com. Rest of world. Skyhawk International, Semperstrasse 1/5, 1180 Wien, Austria. E-mail: iraqifighters@harpia-publishing.com.]

LATIN AMERICAN FIGHTERS

A History of Fighter Jets in Service with Latin American Air Arms

By Inigo Guevara y Moyano



Latin American Fighters: A History of Fighter Jets in Service with Latin American Air Arms, by Inigo Guevara Moyano. 256 A-4 pages. 218 photos. Softbound (2009) ISBN 978-0-9825539-0-9.

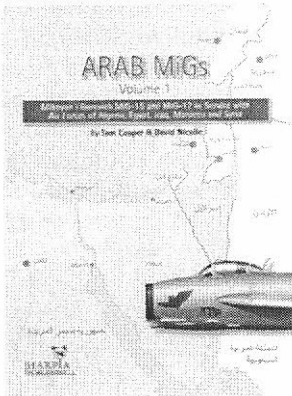
"This book for the first time describes the military fighter jet aviation in Latin America. It covers the eventful history of fighter jets in 17 countries ranging from Mexico in the north down to Argentina in the south.

"Each country is covered type by type in chronological order. Information on each type is being provided related to purchase, squadron service, losses, upgrades and service history.

"Each type ends with a table covering the number of delivered aircraft, different types and subtypes, delivery dates and known serial numbers.

"Each of the over 100 aircraft types mentioned could be covered with at least one picture.

"An appendix lists the existing plastic scale model kits in 1/72, 1/48 and 1/32 scale as well as decal sheets in regards to the 17 Latin American air forces featured in the book "



Arab MiGs Volume 1, MiG-15s and MiG-17s in Service with Air Forces of Algeria, Egypt, Iraq and Syria, by Tom Cooper and David Nicolle. 256 A-4 pages. 171 photos. Softbound. (2009) ISBN 978-0-9825539-2-3. Published by Harpia Publishing. 35.95 Euro.

"Starting in 1955, and for the following 20 years, MiG-15 and MiG-17 formed the backbone of several Arab air forces. They played a prominent role in four major wars and dozens of minor incidents.

"Covering the first decade of this period, this study - Arab MiGs, Volume 1, the first in a series of publications - provides a unique and previously unavailable insight into the service history of both types with five Arab air forces.

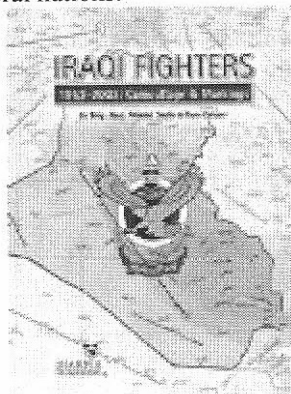
"Even more so, it tells the story of people that flew MiG-15s and MiG-17s in Algeria, Egypt, Iraq and Syria. Several of whom became dominant political figures in most recent history of these countries.

"The reason why Arab countries began purchasing MiGs and thus became embroiled in the Cold War is approached and discussed from an entirely new and original - Arab - point of view.

"Details about combat operations during three major wars between Arabs and Israel, as well as the war in Yemen of the 1960s, are reconstructed on basis of primary evidence, foremost in form of original documents and participants' recollections.

"Aircraft colours, unit insignia, serial- and construction numbers are described in an unprecedented detail.

"Over 200 photos, colour artworks, maps and tables illustrate the story of aircraft and their crews, but also many air combats that became highly influential for the future of aerial warfare and fates of several nations."



Iraqi Fighters - 1953-2003: Camouflage & Markings, by Ahmad Sadik & Tom Cooper. 156 A-4 pages. 140 photos. Softbound. (2008) ISBN 978-0-615-21414-6. Published by Harpia Publishing. 29.95 Euro.

"This book provides an exclusive insight into service history of 13 fighter jet types - from Vampires and Hunters to MiG-29s and Su-24s - that served with Royal Iraqi Air Force (RIrAF) and Iraqi Air Force (IrAF) between 1953 and 2003.

"Serious investigative research, including exclusive primary evidence gathered by both authors in- and outside Iraq, generated a level of detail and colour of unmatched degree in any previous publications about any Arab air force.

"The result is a detailed history of RIrAF and IrAF markings, serial numbers and camouflage patterns, the in-depth history of each Iraqi fighter squadron, their equipment over the time as well as unit and various special insignias.

"Richly illustrated with photographs and artworks, the book provides details about a number of air-to-air and air-to-ground weapons, many put to the ultimate test only by the Iraqi Air Force. A list of original names for air bases used by IrAF is included as well.

"An appendix lists the existing plastic scale model kits in 1/72, 1/48 and 1/32 scale as well as decal sheets in regards to Iraqi Air Force."

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Skyways: The Journal of the Airplane 1920-1940. Published by World War I Aeroplanes, Inc., PO Box 730 Red Hook, NY 12571, USA. Website: www.ww1aeroinc.org. E-mail: ww1aero@gmail.com.

Skyways magazine has been reviewed in SAFO since Skyways #1. Now, the last hard-copy issue #87 is reviewed in the "abstracts" section of this SAFO issue. From now on, Skyways and its companion magazine, WWI Aero, will appear only over the internet or for those without a high-speed connection, as a CD. I find this a mixed blessing.

In the past, when Skyways arrived in the mail, I would read it cover to cover, usually in one sitting. Now, the CD with issues #89 and #89 has been on my deck for over a month and I still haven't finished reading a single article. It's not that I don't recognize the advantages of this format: Color photos can now be included without an increase in the cost of a subscription, drawings and photos can be enlarged at your desk, if an article, photo, or drawings is of special interest you can print it out, and the burden on our postal services will be reduced.

However, I just cannot get used to reading articles off the computer screen.

Maybe if I had Kindle or something of the sorts, I would find it easier to read. But I don't think so; there's something so satisfactory about having a real piece of paper in my hand.

Skyways is still worth subscribing to. For information, contact Tom Polapink at the addresses above.

Skyways #88 October 2008 (86 pages) "Douglas World Cruiser" 6 pages on restoration including 14 photos. "Candler Field" 3 pages including 9 photos. "Jenny Restoration" 4 pages including 10 photos. "Albessard Triavion" 8 pages reproduction of a NACA Report on a unique tandem-wing

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IRAN'S SMART PHANTOMS

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Mick Burton (SAFCH #303),
England

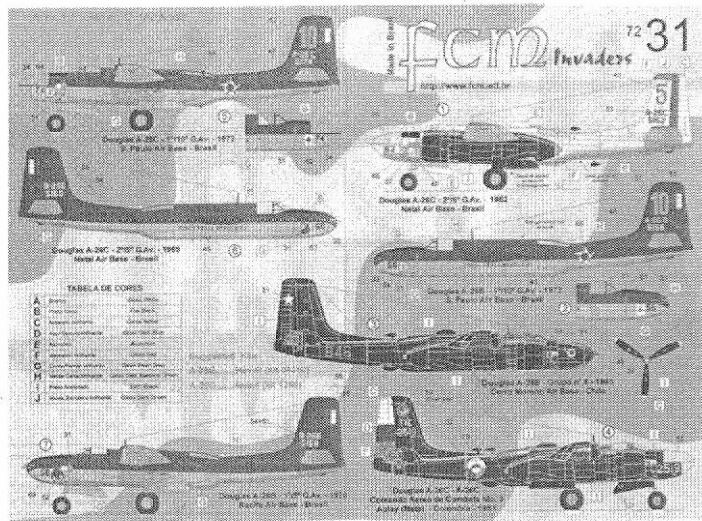
One of the recent publications from Editions TMA includes a full page advertisement for 1/72-scale kits from Azur. These include the previously announced IAR 39 and Fleet 10G (both in Romanian markings) and the Fleet 16

Finch (decals for Canada, China, & Portugal). New releases are: (A) Two kits of the Savio Marchetti SM 79 JIS/JRS B and JRS B 1 twin-engine bombers, both in Romanian markings. (B) Three kits of the Nieuport Ni-29 biplane fighter (1)

French & Belgium markings, (2) Sweden, Italian, & Spanish markings and (3) Japanese & Thai markings. And, (C) two kits of Focke Wulf Fw 59B (1) Hungarian & Romanian markings) & (2) Argentine & Brazilian markings.

If these kits are to the usual excellent Azur quality, they should be very popular with the modeler specializing in the aircraft of the small air forces.

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Latin American Invaders, 1/72-scale decals. FCM #72/31. www.fcm.eti.br

Pull that old Airfix 1/72-scale kit of the B-26 Invader out of the "loft" and begin sanding off those oversize rivets, for FCM of Brazil has released a marvelous decal sheet featuring some seductive South American Invaders. The 120 mm by 170 mm sheet contains all the national roundels, unit insignia, serial numbers, codes, and titles for seven aircraft: five Brazilian and one each for Chile and Colombia. The decals are based, in large part, on the book *Foreign Invaders* by SAFCH members Dan Hagedorn and Leif Hellstrom.

The Brazilian Invaders include (1) Douglas A-26C of 2°/5° G.Av. in 1962 at Natal Air Base, serial 'B-26C 5162', code red '5', in an overall "Aluminum" finish with "Satin Black" engine nacelles. The remaining four Brazilian Invaders are in a very attractive "Gloss Dark Bamboo Green" over "Gloss Pearl Gray" color scheme. Unfortunately, no FS numbers are provided for

these colors. (2) Douglas A-26C of 1°/10° G.Av. in 1972 at St. Paulo Air Base, serial 'A-26C 5174', code red '10'. (3) Douglas A-26C of 2°/5° G.Av. in 1969 at Natal Air Base, serial 'B-26B 5160'. (4) Douglas A-26B of 1°/5° G.Av. in 1970 at Recife Air Base, serial 'B-26B 5158'. (5) Douglas A-26B of 1°/10° G.Av. in 1972 at S. Paulo Air Base.

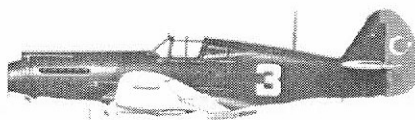
Any of these would make an attractive model, particularly the green and grey one which look quite streamline without their turrets. Pride of place, however, belong to the Invaders from Chile and Colombia: (6) Douglas A-26B of Grupo n°8 in 1965 at Carro Moreno Air Base, Chile, code red '846'. (2) Douglas A-26C of Comando Aereo de Combate No.3 at Aplay (Meta), Colombia in 1951, code white 2519'. Both these aircraft are in the overall "Satin Black" color scheme. The codes of the Chilean A-26B are carried on the vertical fin and on top surface of the port wing and lower surface of the starboard wing with the national insignia on the opposite positions. The codes on the Colombian A-26C are on the fuselage and wings, but curiously, in the reverse order from the Chilean example.

Note that all A-26B aircraft have solid nose with eight guns, while the A-26C aircraft have the transparent nose for the bombardier.

The full-color instruction sheet provides side-view drawings for all aircraft, top and bottom plane-views of the Brazilian aircraft and top plan view of the Chilean and Colombian Invaders. A second, smaller, sheet provides the location of the stencils for the Brazilian aircraft.

The decals are, as expected from FCM, in perfect register, and very colorful with their bright national insignia and colorful unit insignia. This decal sheet be recommended unreservedly to all modelers and is available from the SAFCH Sales Service for \$10 in US and \$12 elsewhere.

All Scale Decals are available from the SAFCH Sales Service for \$5.00 each in the US or \$6.00 each elsewhere. They can also be obtained directly from All Sale Decals, 757 Emory St. #106, Imperial Beach, CA 93032, USA. allscalemodels@yahoo.com.



Turkey Curtiss Tomahawk. 1/48 scale decals, 62 mm by 60 mm. Side and plan view color drawings on the instruction sheet shows the camouflage pattern of dark green and earth brown over light blue.



Venezuela DH Venom. 1/50-scale decals for the Lincoln, Kader kit - 39 mm by 48 mm. The decal sheet of this aircraft contain national insignia, fin flash, serial '2A34', and stenciling.

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*** Indicates item added since 1 April 2010

KITS (1/48)

HAWK	
Nieuport 17	5.00
ICM Ukraine	
Yak-9	5.00
MODAVIA	
Yak-9	10.00
Bell Iroquois	6.00
Mil Mi-2 (1/50)	6.00
OEZ	
Su-7	9.00
PIONEER	
BAe Hawk Mk1A	4.00
SIAT 223 Flamingo	6.00
SMER	
Bristol Bulldog	5.00
Avia BH-11	5.00
Albatros D-III	5.00
SE-5A	5.00
SPOINIA	
RWD-8	10.00

KITS (1/72)

AGA (Poland)	
F-84G Thunderjet	6.00
ALMALO	
MiG-23	10.00
Saunders Roe SR A-1 (vac)	8.00
EE Canberra (1/100)	8.00
AMODEL (Russia)	
BF 109Z	10.00
FoSK 199	10.00
7208 I-153	8.00
I-16 5/6	8.00
Pitts S2A	8.00
Su-26M	8.00
AIR KITS (Russian)	
MiG-3	7.00
CIS	
Yak-6	6.00
La-7	6.00
Bi-1	6.00
LaGG-3	6.00
MiG-21STM	6.00
Po-2	6.00

COLLECTION HOBBI (Russian)	
La-15	7.00
La-5	7.00
HASEGAWA	
F-104G Norway	14.00
HOBBI KIT (Russian)	
Yak-3 (ex Heller)	6.00
KAYUK (Russian)	
R-1	6.00
KP (Czech)	
La-5NF	5.00
La-7	5.00
Avia C-2 (Ar-96)	5.00
Avia B-22 (Il-10)	5.00
Avia B-21	5.00
I-39 Albatros	5.00
Su-7	7.00
Su-25	7.00
Aero C-3A	7.00
MAQUETTE (Russia)	
Il Ya Muromets	12.00

MICRO (Poland)	
LWS Czapla	6.00
PZL P-11c	6.00

MPM	
Focke Wulf Fw 189 V6	12.00
NAKOTNE (Latvia)	
I-3	7.00
I-4	7.00
Su-27	10.00
Su-30 MK	12.00
Su-34	12.00

NOVO (Russia)	
EE Lightning	9.00
F-82 Twin Mustang	9.00
Beaufort	9.00
Marauder	8.00
Jaguar	8.00
F-4K/M Phantom	8.00
Beaufighter	8.00
Shark	8.00
Avenger	8.00
Buccaneer	7.00
P-61 Black Widow	7.00
La-7	6.00
Westland Lynx	6.00
Westland "Wallace" (Mt. Everest)	6.00
Westland Wessex	6.00
P-38 Lightning	6.00
Mirage III	6.00
Hunter FGA 9	6.00
Vengeance	5.00
Hurricane II	5.00
F4U Corsair	5.00
Northrop F-5	5.00
Typhoon	5.00
Tempest	5.00
Supermarine S6B	5.00
Hotspur	5.00
Gloster Whittle	5.00
Vampire	5.00
Seahawk	5.00
Sea Fury	5.00
Spitfire I	3.00

PIONEER (Turkey)	
NA F-86E Sabre	6.00
Spitfire Vc	6.00
GD F-16	6.00
NA F-100C	6.00
Northrop F-5B	6.00
Hawker Sea Fury	6.00
Hawker Sea Fury T-20	6.00
Beech C-45	6.00
Sukhoi Su-21G	6.00

PLASTYK	
Su-22UM-3K	12.00
PZW (Poland)	
RWD-8	6.00
Bocian (glider)	3.00
Mucha (glider)	3.00

RS Models	
9205 AVIA FL 3	14.00
SKARABEI (Russian)	
MiG-9/9M	8.00
MiG-9UTI	8.00
SMER (Czech)	
MS-230	6.00
Tempest V	6.00
Hurricane IIC	6.00
Il-2 (#0865)	9.00

UNDA (Ukraine)	
Su-9B	8.00
Mi-4	8.00
Su-25UB Frogfoot	8.00
ZTS	
PZL-37A/B	6.00
RWD-5bis	4.00
Il-2m3	5.00

ZVEZDA/ITALERI (Russian)	
7212 Mi-24E	10.00
7213 Mi-24D	10.00
7216 Ka-5010.00	

KITS (1/144)

AIRFIX

Boeing 727 (no decals/box)	8.00
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KITS (Resin & Vacuum)

BROPLAN vacuumform	
1/48 VL Pyy	15.00
1/48 TS-8 Bies	15.00
1/48 PZL P 11b-L	20.00
1/72 Me-26310	20.00
1/72 Heinkel HD24	20.00

CECO Bulgaria (resin)	
1/72 German Glider Bomber	5.00

CHOROSZY MODELBUD (1/72 resin)

A24 CWL WZ-X Jupiter	27.00
A25 PZL L-2	27.00
B25 Lublin R-VIII HS	35.00

DAEDALUS (1/72 resin)

J6A/B Jaktlak II	30.00
O1 Tummelisa	41.00

DUBENA Vacuumform (1/72)

LaGG-3	6.00
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LaG-5	6.00
Jak-15	6.00
Jak-17	6.00

FALCON Vacuumform (1/48)	
Hawker Sea Fury	9.50
Seafire 47	9.50
La-5FN	9.50
F-89D Scorpion	15.00

FALCON CONVERSIONS (1/48)	
Spitfire XIV	5.00
FUN MODEL Vacuumform (1/48)	
Yak-38	12.00

JMK Vacuumform (1/72)	
P-51B	6.00
P-51C	6.00

LINO Vacuumform (1/72)	
PZL 130 Orlik	6.00
MARFIX Vacuumform (1/72)	
PZL 130 Orlik	6.00
PZL I-22 Iryd	6.00
Harrier GR.3	6.00
Yak-38	6.00

Miniplast (vacuumform)	
PZL P-43 Sum (1/48)	6.00
MPM (vacuumform/resin)	
Suchoi Su-9 (1/72)	10.00
Polikarpov R-5 (1/72)	10.00
MPM/KARO (vacuumform/resin)	
Avia B 534 (1/48)	10.00

REFEX Vacuumform (1/72)	
LaGG-3	6.00
RUSSIA Vacuumform (1/72)	
Il-4	10.00
Yak-4	10.00
Ju-87B	8.00
Bf-109F	6.00
Su-6	8.00
MiG-9	6.00
Yak-9	6.00
P-63	6.00
MiG-3	6.00
La-15	6.00

SIERRA Vacuumform (1/48)	
Nieuport 11	10.00
WAKU Vacuumform (1/72)	
Jak-15	6.00
Yak-17	6.00
Yak-11	6.00
P-40M	6.00

ACCESSORIES

ACE Ukraine (etched brass)	
7209 Mil Mi-24 Hind	7.00
KP (etched metal)	
MiG-21MF (1/72)	6.00
OZ MODS	
RCR (1/48 etched metal)	
S08 Fiat G01Y	9.00
S11 Macchi 202/205	9.00

RED ROO MODELS

1/48 TA-4G Skyhawk	7.00
1/48 F2A-3/339 conversion	4.00

RUSSIAN WEAPONS (1/72)

B001 SPPU-22-01 Cannon Pod	2.00
B002 H-31A/P Missile	3.00
B003 H-25MR/MT Missile	3.00
B004 H-25ML/MP Missile	3.00
B007 B-13 Rocket Pod	2.00
B009 H-29L Air-Ground Missile	3.00
B012 R-60 Air-Air Missile	2.00
B014 UPK-23-250 Cannon Pod	2.00
B016 S-25L Air-Ground Rocket	2.50
B018 K-36 Ejection Seat	2.00

WARRIOR (1/48)

MiG-21 Seat & Instrument Panel	5.00
ZLINEK Russian Weapons (1/72)	
V002 Ch-31A/P + AKU-58E	2.00

DECALS

ABT	
French Lyander (1/48)	4.00
France 33° Escadre (1/72)	5.00
AERO Poland (1/72)	
F6F Hellcat	3.00
F4U Corsair	3.00
TBF Avenger	3.00
P-38 Lightning	3.00
P-61 Black Widow	3.00

AEROPHILE SERVICE

Romania Bf 109 (1/48)	5.00
P-38 "Yippee" (1/48)	5.00

ANDEAN DECALS

72-01 Ecuador AT-33	5.00
72-02 Ecuador Mirage F-1	7.00
72-03 Ecuador Canberra	7.00
72-04 Ecuador Kfir	7.00
72-06 Ecuador A-37	3.00

AUSSIE DECALS

35-005 Blackhawk & Kiowa	4.50
32-005 Hornet	2.25
48-020 F-111G	6.25
48-021 Hornet (Magpie update)	1.75

48-022 F-111C & G	4.00
48-023 F-111G	4.00
72-006 Hornet	5.25
72-017 Spitfire	5.25
72-022 C-130A/E (4 sheets)	10.75
72-029 Hornet (Magpie update)	1.74

AUSTRALIAN MILITARY MODELS	
Lanc Dambuster L (w/resin)	6.00
Lanc Dambuster N (w/resin)	6.00

AZTLAN Mexico	
48-2 FAM P-47D	6.00
72-2 FAM P-47D (new)	5.00
72-2 FAM P-47D (Green)	2.50
72/3 FAM P-47D (Grey)	2.50
72/13 FAM AT-6	3.00
72/15 FAM AT-6	4.00

BADGER BITS	
RAAF WW2 Roundels (1/72)	7.50

BLUE RIDER (1/72)	
225 Colorful Camels	10.00
226 RFC & RAF Jennies	6.00
227 Captive WWI Allied Fighters	6.00
300 Be-2e	2.00
401 Polish AF #2	4.00
407 Civil LVG C VI	4.00

CUTTING EDGE	
31-017 Korean MiG-15bis	9.00
32-018 Korean MiG-15bis	9.00
48-104 Fw 190A	8.00
48-111 F8F Bearcat	8.00
48-117 AVG Tomahawk	8.00
72-037 Late War Codes (Br)	6.00
72-038 Fw 190 Insignia	6.00

DECAL ART (Italy)	
Italian Tornados (1/48)	10.00
72-038 Fw 190 Insignia	6.00

DECAL ART (Italy)	
Italian Tornados (1/48)	10.00

DELTA AVIATION (1/72)	
72 005 Croatian AF	4.00
US Air Force Europe 1950	6.00

DELTA HOBBY (1/72)	
72-012 Dewoitine D.520	5.00

DUTCH DECALS

48-021 Bristol Fighter Ni-21.23	6.00
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EDUARD	
72 002 Russian WWII Aces	8.00

ESCI (1/72)	
#81 NS F-86 Saber	3.00
#85 Dassault Mirage III	3.00
#98 McDonnell F-101 Voodoo	3.00
#101 F-84 Thunderstreak	3.00

FLYING COLORS AERODECAL (1/48)	
Swedish Mustang & Spitfire	7.00
Swedish P-51D and Spitfire XIX	4.00

FCM (Brazil)

48-07A Bell 206, CAP 4,	
Paulistinha, Sea King, SH-34J	8.00

48-15 S. American Mirage IIIE,	
S-70, UH-1, F-5	8.00

48-21 F-5A/E Tiger II	10.00
48-33 Brazil F-5B/E/F	10.00

72-33 Mirage Part 1 Brazil,	
Chile, Lebanon	10.00

72-34 Mirage Part 3 Brazil,	
Venezuela, Egypt	10.00

72-35 Mirage Part 3 Brazil,	
Chile, Peru, Argentina	10.00

72-37 F-14A Tomcat Iran	10.00
72-38 Mirage 2000 Brazil, Peru	10.00
72-39 Tracker Brazil, Argentina,	
Uruguay	12.00

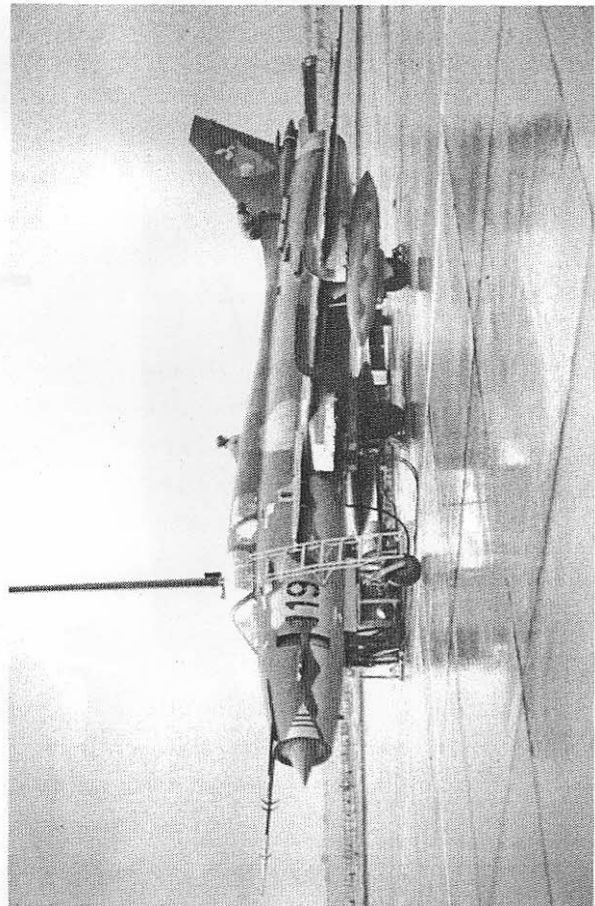
HAD Hungary	
48-003 Bf 109	4.00
48-005 MiG-23 MF	4.00
48-008 Bf 109G	5.00
48- MiG-23	6.00
48-012 P-51D	6.00
48-013 Bf 110	6.00
72-007 Su-22	4.00
72- Mig-23	4.00

FCM (Brazil)	
48-07A Bell 206, CAP 4,	

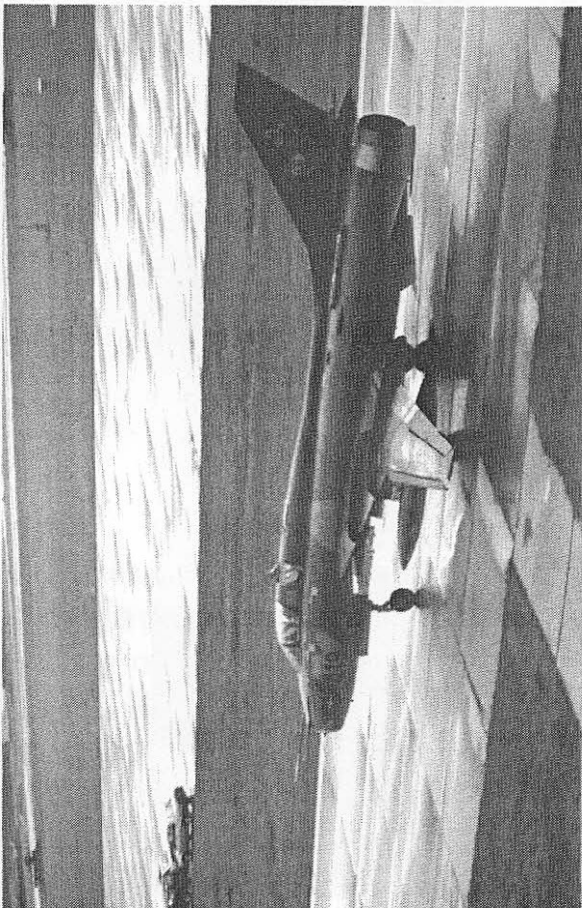
72-006 Mi-8-17	5.00	REVELL BRAZIL (1/32)		CZECH		Monographs	
72-008 Mi-24	5.00	Mirage 5 (France & Israel)	4.00	Jakab (Czech English)		Pe-2	5.00
72-009 F-15E	5.00	ROO DECAL		#1 Letov S-328 (I)	20.00	F-4 Phantom	6.00
72-010 A-10	5.00	RAAF Mirage III (1/48)	9.00	#2 Letov S-328 (II)	20.00	P-63 Kingcobra	8.00
72-011 MiG-21MF SMT	5.00	SAAD (1/48 & 1/72)		#3 Avia BH-33	20.00	P-51 Mustang	8.00
72-012 Chinook	5.00	#2 (9 by 8 in) no instructions	5.00	#5 MiG-15 in Cz (I)	20.00	B-17	6.00
72-013 Su-24 Fencer	5.00	#4 (8.5 by 11) no instructions	5.00	*** #11 Il-2	20.00	BF-110	8.00
72-014 AH-1 Sea Cobra	5.00	SWEET DECALS (1/144)		*** #13 Yak-11 C-11	25.00	MiG-25	8.00
72-015 MiG-23 Flogger	5.00	Sea King (JMSDF)	10.00	*** #15 Il-10: Avia B-33 (I)	25.00	Jaguar	5.00
72-016 Mirage 2000	5.00	Sea King (USN/USMC/NASA)	10.00	*** #16 Mi-8-17	25.00	Polygon	
72-017 MiG-27/23BN	5.00	SKYLANCER		Reaktivni Letouny, (1965)	10.00	I-5, I-15b, I-15bis	15.00
72-019 L-39 Albatros	5.00	CW-4801 Avro CF-100 Mk.5	9.00	4: Publication MiG-21	15.00	Su-9 to Su-17	10.00
72-020 AH-64 Apache	5.00	CW-7204 Avro CF-100 Mk.5	7.00	Ceskoslovenske Letectvi 1918-39	25.00	Su-34	18.00
72-021 F-16C	5.00	SKYMODEL (Italy)		MBI/Sagitta Me 262 Schwalbe	12.00	Su-27	15.00
72-022 MiG-15	5.00	48-013 Fiat G 55	8.00	M-Hobby		Translation for Su-27 above	5.00
72-023 F/A-18	5.00	48-036 Fiat CR 42	8.00	#1 Heinkel He 111	12.00	Samolet Yak-55M	16.00
72-024 Su-27 Flanker B	5.00	SMALL WORLD ACCESSORIES (Italy)		#2 Griffon Spitfires	12.00	Samolet 1939-45 #8	10.00
72-025 Israeli F-4	5.00	48001 (T-33, MB 320, F-104, Tornado)	13.00	Modelpres #4 Ki.61 & Ki 100	8.00	Sport Aviation	7.00
72-026 Mi4 Hound	5.00	SUPERSCALE		Triada		WWI Aircraft	
72-027 F-18 Hornet	5.00	48-435 A-37B Dragonflys	4.00	MiG-17, Hurricane, Spad	9.00	British & French	10.00
72-028 MiG-25 Foxbat	5.00	TASMAN		C-2, L-29, Tiger Moth	16.00	German & Austro-Hungarian	10.00
72-029 A-6E Intruder	5.00	48-05 RAAF A-Type Roundels		ENGLAND		Yak-9	10.00
72-030 MiG-17 Fresco A	5.00	Smaller Sizes	6.00	Profile: Zero	5.00	SWEDEN	
72-031 Su-17M4 Fitter	5.00	48-08 RAAF B-Type Roundels		GERMANY		C-130 Production List 1955-09	10.00
72-033 Su-17M4R/22M4	5.00	Larger Sizes	6.00	Flugzeuge und Hubschrauber		C-130 Production List 1954-11	10.00
72-034 F/A-18 Hornet Stencils	5.00	48-11 RAAF B-Type Roundels		der NVA von 1971	15.00	C0130 Production List 1954-12	18.00
72-037 MiG-21bis	5.00	Smaller Sizes	6.00	Gefechtbereit!	15.00	UKRAINE	
72-040 MiG-19PM	5.00	TECHMOD Poland (1/72)		Legende Flugzeuge	6.00	Yak-28PP	12.00
72-043 Il-28/RT/U	5.00	F4U Corsair	8.00	MiG Flugzeuge, Eyermann	15.00	Tu-142	15.00
72-044 MiG-28A/B/G	5.00	F-18A	4.00	Sowjetische Flugzeuge, Schmidt	16.00	USA	
72-045 MiG-29 UB	5.00	EE Lightning	3.00	Sowjetische Jagdflugzeuge	15.00	Historia Reprint	
72-047 F/R/84G	5.00	Tempest	3.00	Trans Luft und Raumfahrt	12.00	AAF Aid to European Resistance	
72-049 F-84G	5.00	Typhoon	3.00	Waffen Arsenal: #97 V-1/Fi-103	6.00	Movements	30.00
72-050 Su-27 (See SAFO #119)	5.00	Westland Lynx	3.00	HUNGARY		Armed Forces Handbook	
72-051 F-14A (See SAFO #119)	5.00	BF-109E	3.00	Makettstudio		Balkan Battles (2 volumes)	20.00
HIT KIT Poland (1/72)		F6F-3 Hellcat	3.00	#1 Bf 109E-F	10.00	F-86 Sabre, Dorr	16.00
MiG-3, Su-2, etc. (1/48)	8.00	P-51D Mustang	3.00	#2 Bf 109G-K	10.00	Flying Dragons (South Vietnam)	16.00
HOBIC (1/48)		TECHMOD Poland (1/48)		#3 F-16 Fighting Falcon	10.00	USAF Close Air Support, Airline	15.00
Kawasaki Ki-45 Nick	10.00	Polish Fokker V.VII	10.00	POLAND		Wings #4 Team Stealth F-117	5.00
ILIAD DESIGN (1/48)		Dornier Do-217K	5.00	16 Eskadra Wywiadowcza 1919-20	20.00	Final Assault on the Rising Sun	15.00
Normandie-Nieman Yaks	9.00	TOM Modellbau		ACE Publication			
INSCALE Finland (1/72)		East German Insignia (1/32)	16.00	F-86 Sabre: MiG Killer	7.00	MAGAZINES	
AC027 Bf 109 G-6/G-6	6.00	East German Insignia (1/48)	8.00	Bitwa o Anglie 1940	7.00	BELARUS	
AC029 Bf 109 G-2/G-2	6.00	TRAVERS Russia (1/72)		P-47 Thunderbolt: Bubbletop	7.00	Aero Plan 4/93 1/94 2/94	each 6.00
KUIVALAINEN DECALS		72-019 MiG-23/27	8.00	F-16A/C Fighting Falcon	7.00	CROATIA	
Finnish post-war roundels	8.00	72-055 Mirage III	8.00	Fokker D.21	7.00	Hrvatski Vojnik	
LIFT HERE		72-058 Korean War	8.00	MiG-21bis Fishbed L/N	7.00	(4 issues 1993)	each 5.00
E-72H MiGs in Yugoslav Sky	11.00	Bell UH-1 (1/48)	5.00	Iljuszyn Il-28 Beagle	7.00	CZECH REPUBLIC	
LINDEN HILL DECALS		Ju 88A	2.00	Messerschmitt Me 163 Komet	7.00	HPM 1/97	6.00
72002 Russian MiG-23	8.00	Yak-38	2.00	AJ Press Monografie Lotnicze		Revi 32-38, 40-41, 43-52,	
72005 Flankers on Parade	17.00	Re 2001	2.00	#7 A6M Zero	10.00	59-66	each 4.00
72009 L-39s of Central Asia	20.00	A5M4	2.00	#27 IAI Kfir	10.00	ENGLAND	
72011 Su-27 Stenciling	8.00	A6M2	2.00	BV 238 1/72-scale drawings	5.00	Air International 6/80	5.00
72013 Mi-24 Stenciling	8.00	Fw-190D	2.00	#30 Me 262: Part 1	10.00	Quarter Scale Modeller	
72014 Lipetsk Top Guns	25.00	Me-262	2.00	Biblioteczka Skrzydlatej Polski		2/2 2/3 3/2 5/98 6/98	
72019 Iraqi Fighters	16.00	P-61 Black Widow	5.00	#03 Samoloty Naklonych walczyl		7/98 8/98 9/98 10/98	each 5.00
48019 Iraqi Fighters	16.00	Bristol Blenheim	5.00	Polacy	8.00	Small Scale Aviator 1/3	5.00
32005 Iraqi Fighters	16.00	Swordfish	5.00	#04 Samoloty mysliwskie w		FRANCE	
32006 Flanker Sparka	24.00	Avenger	5.00	lotnictwie polskim	8.00	Ciel de Guerre 1.2,7	each 14.00
32007 Ukraine Flankers	24.00	Curtiss P-40	5.00	#30 Samoloty bombowe WWI	8.00	AirMag Hors Serei #3	14.00
MAI (1/72)		Su-22M-4	5.00	#34 Samoloty MiG	8.00	HUNGARY	
DCL-3 Po-2/Yak-6	5.00	VENTURA (1/32)		#42 Godlo i barwa polskim 39-45	8.00	Modell es Makett 2/97	3.00
DCL-4 Su-27/Mi-4	5.00	V3255 Australian P-51D	5.00	Luftwaffe: Bombowe i Szturmowe	8.00	JAPAN	
MAX DECALS		V3265 Israeli Mosquito	5.00	Klub 1/72 (Hurricane, Yak-1, Bf-109)	4.00	1 2/1 2/2 2/3 9/2 10/2	each 4.00
32-001 Exotic Lysanders (Pt 1)	9.00	V3263 Australian Beaufighter	5.00	Dywizjon 303, Fiedler	5.00	POLAND	
32-002 Exotic Lysanders (Pt 2)	9.00	V4821 Spitfires: RAAF & RNZ	6.25	Wojsko Polskie, Kolinski	5.00	Model Fan 8/02,2/03	each 7.00
48-001 Irish AC 1922-1997	8.00	BOOKS		Nowoczesny samolot wojskowy	8.00	RUSSIA:	
48-002/72-003 Wing Stripes	6.00	ARGENTINA (add \$3.00 for non USA)		Przegląd Konstrukcji Lotniczych		AC 1/93	5.00
48-003 Exotic Lysanders	9.00	1 Ae-24 Calquin	35.00	#11 B-52	7.00	AK 2/94	7.00
48-007 Polar DHC-3 Otter	9.00	Serie Aeronaval		Skrzydla w miniaturze		Air Fleet Herald 3/95 5/96	each 8.00
48-009 Polar Beaver, Part 2	9.00	#12 Super Etendard	10.00	#1 Piper Cub	6.00	1-2/96	16.00
48-010 Lockheed Hudson	9.00	#15 Grumman Duck	10.00	#4 P-38 Lightning	6.00	Krilya Rodini	
MICROSCALE DECALS (1/48)		#17 Sikorsky S-55/H-19	10.00	#12 SB2C	6.00	4/93 6/93 6/94 3/95	each 6.00
48-257 F/R/84F (China & Germany)	8.00	#20 AerMacchi MB 326	10.00	#15 Yak-3	10.00	SPAIN	
MODEL-AIRE (1/72)		#21 Lockheed L-188 Electra	17.00	#21 Yak-11	10.00	Historia Militar 15	12.00
MiG-29 & Mi-8	5.00	#25 Mariner, etc.	17.00	Wydawnictwo Militaria		UKRAINE	
MiG-21	5.00	#26 Tracker & Turbo Tracker	17.00	#110 Focke-Wulf Ta 154	15.00	Aviation & Time 2/96 4/97	each 7.00
MODEL ART		*** #28 NA T-28 Fennec	17.00	RUSSIA:		USA	
48-001 Mirage 2000C	6.00	Serie Fuerza Aerea		Aero Fan (Curtiss 75, F-86, He 129, UH-1, F-5)	8.00	Air Combat 1978 Yearbook	4.00
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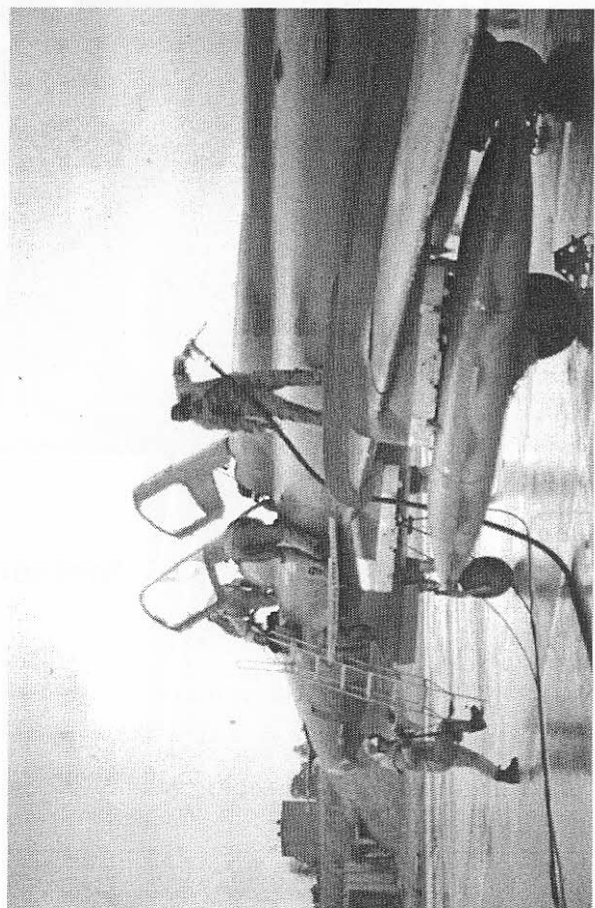
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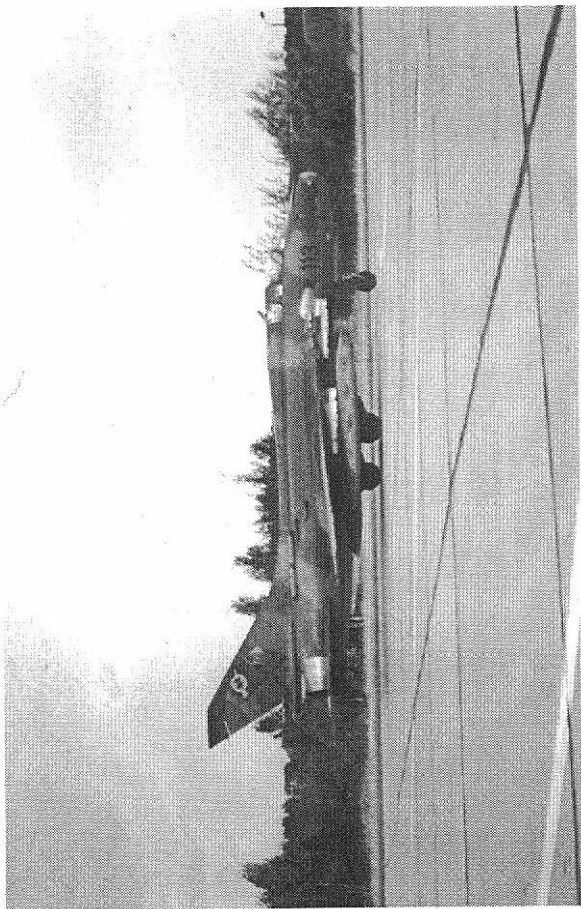
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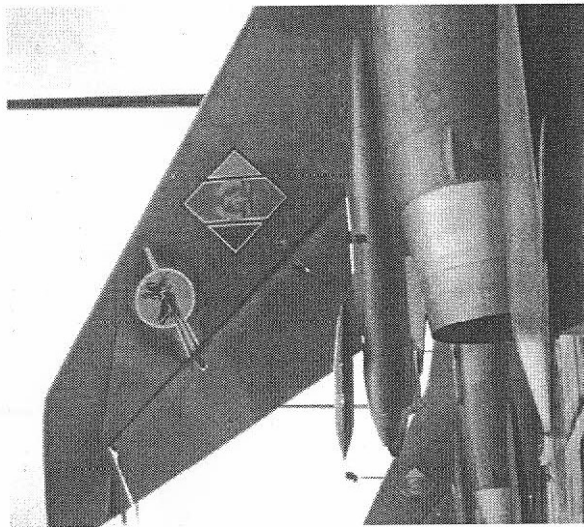
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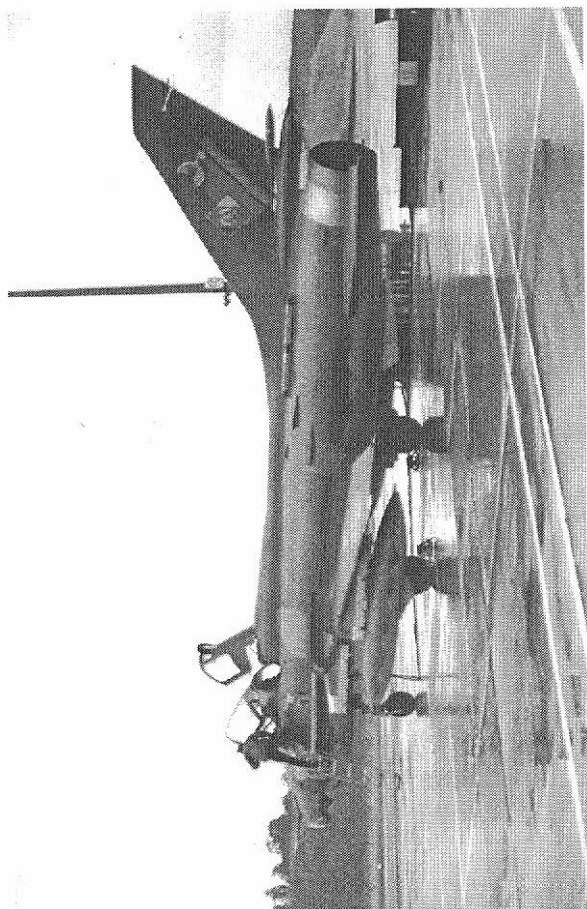
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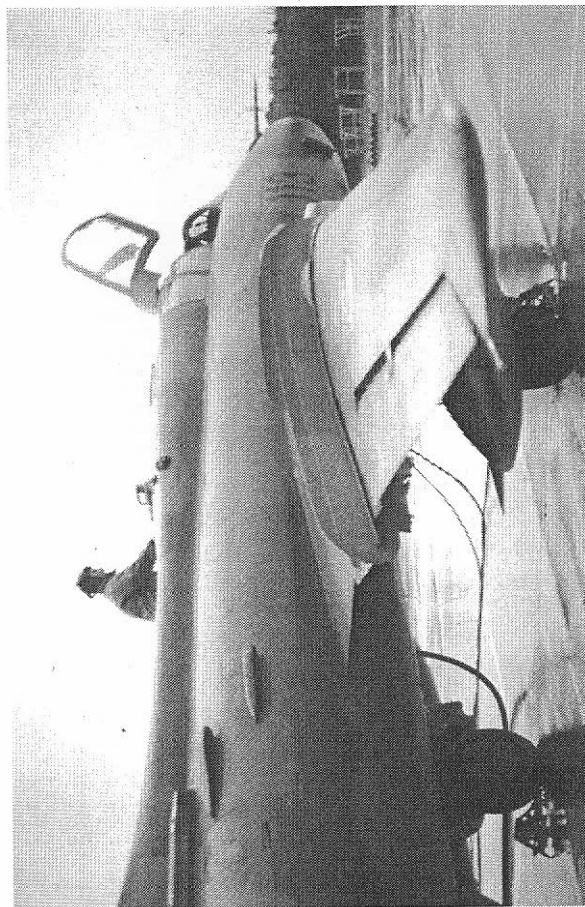
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